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ABSTRACT

At Appalachia Educational Laboratory, assessments of educational needs in Virginia, West Virginia, Tennessee, and Kentucky serve as a basis for reviewing and planning regional programs. The 1989 needs assessment project proceeded in several phases: extrapolating a set of 30 educational needs statements from resource files and selected survey data, identifying and training a needs assessment consultant in each of the four states, and holding meetings of each state caucus board led by the consultant. The outcomes of these half-day work sessions were rankings of the 30 needs statements and discussions of each state's ability to address its highest ranked needs along several important dimensions. Across the region, the highest ranked needs dealt with community and financial support for local schools, recruitment and professional development of teaches and administrators, curriculum and instructional improvement, participative decision making at the school level, and linkages between educational research and development and educational policy formation. Appendices contain the needs statements, state caucus results, regional overall ratings of the needs statements, and lengthy status reports on education in the four states. Each state status report covers general demography, school demography, support and control of public elementary and secondary education, role of higher education in public elementary and secondary education, trends in public education, and research and development resources available to support elementary and secondary education. (SV)

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FY 89 AEL
NEEDS ASSESSMENT
PROJECT REPORT

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FY 89 AEL NEEDS ASSESSMENT PROJECT REPORT

Submitted to:

Office of Educational Research and Improvement
U. S. Department of Education
Washington, D. C.

Submitted by:

Appalachia Educational Laboratory
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The Appalachia Educational Laboratory (AEL), Inc., works with educators in ongoing R & D-based efforts to improve education and educational opportunity. AEL serves as the Regional Educational Laboratory for Kentucky, Tennessee, Virginia, and West Virginia. It also operates the ERIC Clearinghouse on Rural Education and Small Schools. AEL works to improve:

- professional quality,
- curriculum and instruction,
- community support, and
- opportunity for access to quality education by all children.

Information about AEL projects, programs, and services is available by writing or calling AEL, Post Office Box 1348, Charleston, West Virginia 25325; 800/624-9120 (outside WV), 800/344-6646 (in WV), and 347-0400 (local); 304/347-0487 (FAX number).

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Executive Summary

Appalachia Educational Laboratory
FY 89 Needs Assessment Project

EXECUTIVE SUMMARY

At the Appalachia Educational Laboratory (AEL), assessments of the Region's educational needs serve as a basis for reviewing and planning the Regional Educational Laboratory (REL) programs. Three major needs assessment activities have been conducted at AEL since the 1985 needs assessment project. One was the design and implementation of an ongoing educational environmental scanning system to monitor educational trends in the Region's states. Second was the 1987 needs assessment survey of a sample of the Region's educators. The third activity, the FY 89 needs assessment project, is the subject of this report.

The FY 89 needs assessment (NA) project was designed to be completed in eight steps. The first step produced a set of 30 educational need statements. The statements were extrapolated from AEL scanning-system data, supplemented by Resource Center files and selected survey data. The second step was the identification of one NA consultant for each AEL state. This step was completed by contacting consultants recommended by each AEL state caucus Board group. Next, in the third step, the four consultants were trained by AEL staff to facilitate a specially structured meeting with state caucus members. The training included a discussion of the education status reports that consultants were to produce following the state caucus meetings.

At the fourth step, each state caucus group met in a half-day work session led by the consultant. The outcomes of the state caucus work sessions were rankings of the 30 need statements in priority order and discussions of the state's ability to address the highest-ranked needs along several important dimensions. Fifth, AEL staff supplied each consultant with updated information for use in the education status reports. Submitting the completed status reports was the sixth step. The seventh step was to compile the results of the four state caucus work sessions into a form convenient for use in AEL program planning. The eighth, and final, step was documenting processes and outcomes of the assessment in a final report. The FY 89 AEL Needs Assessment Project Report will be used by AEL Board and staff as input for program planning.

Data produced in the state caucus meetings were inspected to obtain a regional perspective on educational needs. Looking across the Region, eight need statements were rated in the "high" category (i.e., by three or four states), six need statements were rated in the "low" category, and the remaining 16 need statements were placed in the "medium" category. In terms of topic areas, two of the high-need statements dealt with support of local schools (community and financial support), three of the high-need statements dealt with the recruitment and professional development of teachers and administrators, and two dealt with curriculum and instruction issues such as the use of technology to improve instruction

and involvement in decisionmaking by those implementing and affected by school-level decisions. Finally, one high-priority statement dealt with the need to ensure that educational policy is informed by the outcomes of educational research and development.

In summary, the results of the FY 89 needs assessment project reconfirmed three of AEL's goals selected in 1986, namely: (1) improve professional quality, (2) improve curriculum and instruction, and (3) improve community support. The fourth AEL goal of equity in education is a pervasive component of the Lab's mission.

Project Summary

Appalachia Educational Laboratory
FY 89 Needs Assessment Project

PROJECT SUMMARY

At the Appalachia Educational Laboratory (AEL), assessments of the Region's educational needs serve as a basis for fine-tuning current programs and planning future ones. The current needs assessment is a project stipulated in contract #400-86-0001 to perform as the Regional Educational Laboratory (REL) for Region 3. Staff designed this project to build upon the results of the 1985 needs assessment and related activities completed since then.

Since the completion of the 1985 needs assessment (NA) project and the awarding of the REL contract to AEL, several educational needs assessment activities have been conducted. First, in order to monitor trends and/or changes in the Region's needs, AEL established an ongoing education environment scanning system. The scanning system was designed and installed in 1986 and has undergone several improvements in the intervening years. In this environmental scanning system, staff review daily the largest circulation newspapers from the capital cities in the four-state Region. Articles related to education are flagged, cut, copied, indexed, and filed by topical areas into a computer database. In a typical month, 150 education-related articles are entered into the scanning-system database.

Second, in 1987, AEL converted the most frequently cited topics in the scanning-system database into survey questionnaire items. After pilot testing, a 29-item survey was mailed to a sample of the Region's educators to assess: (1) how frequently they thought about those needs,

(2) whether they could do something to address the needs, and (3) whether they felt a strong connection to the needs. The results of that survey reconfirmed three of the four AEL goals chosen in 1986. The fourth AEL goal of equity in education was retained because it is essential to the Lab's mission.

The first major step in the 1989-90 needs assessment project was the development of the list of need statements to be used in subsequent procedures. The criteria for the component parts of the need statements were decided first. Next, lists of candidate topic areas were generated from the environmental scanning system, the AEL Resource Center list of "hot topics" for information searches, and the Rural, Small Schools program needs rating activity completed at an education conference. A total of 84 topic area candidates for need statements was read, reviewed, and discussed by AEL staff in a series of work sessions. Subsequently, the list of candidates was reduced to less than half the original number. Next, these topic area names were converted into full need statements. The AEL Management Team reviewed this draft list of need statements and offered suggestions for improvements and additions to the list. Last, the outcome of this step was the final list.of 30 need statements for use in planned NA activities. The final list of 30 FY 89 need statements appears in Appendix A.

The second major step in the NA project was the selection of one state consultant for each AEL state. Persons in the NA state consultant positions were assigned to work with the AEL state caucus (all the AEL Board of Directors' members for each state) to facilitate a group process meeting and to author a report on the state's educational needs.

At the April 15, 1989, meeting of each AEL state caucus, group members met, discussed, and recommended individuals within their state whom they wanted to lead them in the July 1989 work session and author the needs status report. Thus, the NA state consultants required knowledge of pressing educational needs in their respective state, access to relevant state data, technical writing skills, and, of course, demonstrated group processing and leadership skills. A copy of the task sheet used by state caucus members to select their recommendations for state consultants appears in Appendix B. The outcome of the April 1989 state caucus meeting was a list of recommended consultants to facilitate the next meeting of the group and to author the state report. Next, AEL retained the consultants to perform those services. A list of the FY 89 NA state consultants appears in Appendix C.

The third major step was the orientation and training of the four NA state consultants. AEL staff designed and led the sessions on July 27, 1989, at the AEL facilities in Charleston. A copy of the agenda for the orientation and training session appears in Appendix D. After an orientation to AEL and the FY 89 needs assessment project, the four state consultants participated in several interactive sessions designed to refine and finalize the processes for the AEL Board's state caucus meetings. The most important sessions were: (1) simulations of the voting process to prioritize the 30 need statements into the final list for each state group, and (2) simulations of the processes used to secure the thinking and input of the Board members in the state caucus working sessions relative to their set of highest-ranked need statements. These simulations were aided by an AEL staff-designed "Educational Need

Statement Worksheet." A copy of the group process worksheet appears in Appendix E. At the training session, each NA state consultant practiced the facilitation skills required to complete the worksheet. Each such simulation was reviewed and discussed by the full group. Suggestions for improving the planned state caucus work sessions were offered and discussed by the full group. Finally, the requirements for the final state status of educational needs report were outlined and discussed. The outcome of the full-day training session was a consensus on the expectations and the processes to be used by the NA state consultants in both the state caucus meeting and the writing of the status report.

The fourth major step in the NA project was the state caucus work sessions. As part of the AEL Board of Directors' quarterly meeting in Virginia Beach, Virginia, on July 21-22, 1989, each state caucus met for a Saturday morning work session. A copy of the overview of the meeting provided each participant is included in Appendix F. The group process sessions were led, as planned, by the NA state consultant for each state. The outcomes of these NA work sessions were two-fold. One was a ranking of the 30 educational need statements in priority order from top to bottom. Then, the group identified a set of "high" need statements for further deliberations. Another outcome was a set of completed worksheets--one per each "high" need statement. The unique feature of the completed worksheets was that each one recorded the group's deliberations in terms of: (1) the state's awareness, capability, and readiness to address the need statement; (2) opportunities and/or resources in the state to address the need statement; and (3) the likelihood that the state would use AEL's assistance to address the need statement.

About this time, the fifth major step in the NA project was completed. Here, AEL staff located, secured, and copied portions of relevant documents designed to be helpful input to authors of the state status reports. Each NA state consultant was given a set of these references with pertinent demographic and educational data and a tentative outline for the needs assessment report for his/her state. Also, a copy of the 1985 AEL needs assessment state report was given to each consultant. From the previous training session, each NA state consultant/author knew that he/she had to integrate the results of the state caucus rankings and ratings of the need statements into the state status report.

Writing and submitting the state status reports by the NA state consultants/authors was the sixth step in the process. Using the 1985 state reports as a starting point, each consultant wrote a new report using up-to-date references, new demographic data, and more recent educational data. Although following a general outline for the status report, each author was given latitude in the length, style, and content of the individual state report. As explained above, each report was to contain the basic results of the state caucus work sessions, although AEL staff did not prescribe precisely how that was to be completed. The four completed educational needs state status reports were received and reviewed by AEL staff. Copies of the four state status reports are included in the appendices (Kentucky in Appendix G, Tennessee in Appendix H, Virginia in Appendix I, and West Virginia in Appendix J).

The seventh step in the FY 89 NA project was to compile the results of the four state caucus work sessions into a convenient form. Since the four state caucuses completed their final rankings of need statements in slightly different manners, AEL staff had to synthesize the rankings across the states in a uniform reporting style. To do this, staff went back to the voting process raw data for each state caucus group and rerecorded the raw data and recalculated the rankings of the need statements. It should be noted that this step in no way took anything away from the set of need statements identified originally as "high" by each state caucus group. All of the identified "high" need statements for all four states were preserved intact. The few changes that did take place were in the "medium" and "low" need statements. The outcome of this step was a single worksheet containing all of the state caucus rankings and ratings of the 30 need statements. For comparison purposes, the state's results were listed side by side. From this worksheet, staff compiled the list of high-, medium-, and low-rated need statements. The final ratings of the 30 need statements appear in Table 1 in the following section.

For a regional perspective, the results of the state caucuses were inspected across the four states and presented in Table 1, "Regional Ratings of the FY 89 AEL Need Statements." Table 1 indicates that eight need statements were ranked in the "high" category (i.e., by three or four states), six need statements were ranked in the "low" category, and the remaining 16 need statements were placed in the "medium" category. High-category statements included two about the support of local schools (community support and financial support); three about the recruitment and professional development of teachers and administrators; and two about curriculum and instruction issues such as the use of technology to improve instruction and the involvement in decisionmaking by those implementing and those affected by school-level decisions. Finally, one high-priority statement dealt with the need to ensure that educational policy is informed by the outcomes of educational research and development.

To summarize, the results of this FY 89 needs assessment project reconfirmed three of AEL's goals selected in 1986, namely: (1) to improve professional quality, (2) to improve curriculum and instruction, and (3) to improve community support. The fourth AEL goal, to improve the opportunity for access to quality education by all children, is a pervasive component of the Lab's mission.

The eighth, and final, step in the FY 89 NA project is the compilation of the prior steps, including the four state status reports of educational needs, into one report. This compiled final report, described herein with its appendices, is designed to provide AEL staff and Board with input for planning future efforts. The committees and groups targeted to receive and consider this report include: (1) the AEL Board of Directors, (2) the AEL Future Committee, (3) the AEL Executive Committee, (4) the AEL state caucuses, and (5) the AEL Management Team.

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Table 1:
Regional Ratings

Table 1

Regional Ratings of the FY 89 AEL Need Statements

Need Statements	Regional Rating
1. We need more community support of local public schools.	High
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.	High
3. We need educational reforms at both the state and local levels.	Medium
4. We need to improve career education programming/career guidance services.	Medium
5. We need to improve vocational education.	Low
6. We need improved financial support for local schools.	High
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).	Low
8. We need to improve sex education programming in K-12 schools.	Medium
9. We need to improve teachers' working conditions.	Medium
10. We need to improve the recruitment of highly talented individuals into the teaching profession.	High
11. We need to improve the involvement of parents/guardians in the education of their school-age children.	Medium
12. We need to improve students' mastery of basic skills.	Medium
13. We need special programs for at-risk youth in danger of dropping out of school.	Medium
14. We need to improve professional development programs for teachers and school administrators.	High
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.	High
16. We need to improve programs that enhance secondary students' motivation to learn.	Medium

Table 1 (continued)

Need Statements	Regional Rating
17. We need programs to enhance the functioning of local boards of education.	Medium
18. We need to provide programs to address the special needs of minority students and community members.	Medium
19. We need to improve instructional programming for middle school-age students.	Medium
20. We need to improve school facilities to ensure the delivery of quality education to all children.	Medium
21. We need programs to improve students' higher order thinking skills.	Low
22. We need programs to improve adult literacy.	Medium
23. We need programs to improve the care and education of preschool children.	Medium
24. We need programs that address the special needs of small, rural schools.	Medium
25. We need programs that address the special needs of urban schools.	Low
26. We need programs that provide care for the children of public school students.	Low
27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.	High
28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.	Medium
29. We need to study the use of technology as a means for improving the delivery of instruction to all children.	High
30. We need to improve educational services for all exceptional students.	Low

State Caucus Results

Rankings and Ratings of the FY 89 Educational Need Statements by the Kentucky State Caucus

Educational Need Statements	N.S. Rank	N.S. Rating
1. We need more community support of local public schools.	6*	High
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.	5	High
3. We need educational reforms at both the state and local levels.	12*	Medium
4. We need to improve career education programming/ career guidance services.	15*	Low
5. We need to improve vocational education.	15*	Low
6. We need improved financial support for local schools.	1	High
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).	17*	Low
8. We need to improve sex education programming in K-12 schools.	17*	Low
9. We need to improve teachers' working conditions.	11*	High
10. We need to improve the recruitment of highly talented individuals into the teaching profession.	3	High
11. We need to improve the involvement of parents/guardians in the education of their school-age children.	9*	High
12. We need to improve students' mastery of basic skills.	13*	Medium
13. We need special programs for at-risk youth in danger of dropping out of school.	6*	High
14. We need to improve professional development programs for teachers and school administrators.	4	High
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.	12*	Medium
16. We need to improve programs that enhance secondary students' motivation to learn.	9*	High

Kentucky (continued)

Educational Need Statements	N.S. Rank	N.S. Rating
17. We need programs to enhance the functioning of local boards of education.	2	High
18. We need to provide programs to address the special needs of minority students and community members.	14*	Low
19. We need to improve instructional programming for middle school-age students.	13*	Medium
20. We need to improve school facilities to ensure the delivery of quality education to all children.	13*	Medium
21. We need programs to improve students' higher order thinking skills.	13*	Medium
22. We need programs to improve adult literacy.	12*	Medium
23. We need programs to improve the care and education of preschool children.	11*	High
24. We need programs that address the special needs of small, rural schools.	12*	Medium
25. We need programs that address the special needs of urban schools.	16	Low
26. We need programs that provide care for the children of public school students.	14*	Low
27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.	13*	Medium
28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.	17*	Low
29. We need to study the use of technology as a means for improving the delivery of instruction to all children.	6*	High
30. We need to improve educational services for all exceptional students.	15*	Low

Note: * = Tie

Rankings and Ratings of the FY 89 Educational Need Statements by the Tennessee State Caucus

Educational Need Statements	N.S. Rank	N.S. Rating
1. We need more community support of local public schools.	5*	High
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.	2	High
3. We need educational reforms at both the state and local levels.	11*	Low
4. We need to improve career education programming/ career guidance services.	9*	Medium
5. We need to improve vocational education.	11*	Low
6. We need improved financial support for local schools.	9*	Medium
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).	8*	Medium
8. We need to improve sex education programming in K-12 schools.	8*	Medium
9. We need to improve teachers' working conditions.	11*	Low
10. We need to improve the recruitment of highly talented individuals into the teaching profession.	6*	High
11. We need to improve the involvement of parents/guardians in the education of their school-age children.	7*	Medium
12. We need to improve students' mastery of basic skills.	10	Medium
13. We need special programs for at-risk youth in danger of dropping out of school.	11*	Low
14. We need to improve professional development programs for teachers and school administrators.	3*	High
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.	4*	High
16. We need to improve programs that enhance secondary students' motivation to learn.	7*	Medium

Tennessee (continued)

Educational Need Statements	N.S. Rank	N.S. Rating
17. We need programs to enhance the functioning of local boards of education.	1	High
18. We need to provide programs to address the special needs of minority students and community members.	4*	High
19. We need to improve instructional programming for middle school-age students.	4*	High
20. We need to improve school facilities to ensure the delivery of quality education to all children.	11*	Low
21. We need programs to improve students' higher order thinking skills.	7*	Medium
22. We need programs to improve adult literacy.	5*	High
23. We need programs to improve the care and education of preschool children.	11*	Low
24. We need programs that address the special needs of small, rural schools.	3*	High
25. We need programs that address the special needs of urban schools.	11*	Low
26. We need programs that provide care for the children of public school students.	11*	Low
27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.	4*	High
28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.	7*	Medium
29. We need to study the use of technology as a means for improving the delivery of instruction to all children.	6*	High
30. We need to improve educational services for all exceptional students.	11*	Low

Note: * = Tie

Rankings and Ratings of the FY 89 Educational
Need Statements by the Virginia State Caucus

Educational Need Statements	N.S. Rank	N.S. Rating
1. We need more community support of local public schools.	8*	High
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.	4*	High
3. We need educational reforms at both the state and local levels.	17*	Medium
4. We need to improve career education programming/ career guidance services.	17*	Medium
5. We need to improve vocational education.	21*	Low
6. We need improved financial support for local schools.	3	High
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).	21*	Low
8. We need to improve sex education programming in K-12 schools.	21*	Low
9. We need to improve teachers' working conditions.	21*	Low
10. We need to improve the recruitment of highly talented individuals into the teaching profession.	10*	High
11. We need to improve the involvement of parents/guardians in the education of their school-age children.	17*	Medium
12. We need to improve students' mastery of basic skills.	21*	Low
13. We need special programs for at-risk youth in danger of dropping out of school.	4*	High
14. We need to improve professional development programs for teachers and school administrators.	8*	High
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.	4*	High
16. We need to improve programs that enhance secondary students' motivation to learn.	15*	Medium

Virginia (continued)

Educational Need Statements	N.S. Rank	N.S. Rating
17. We need programs to enhance the functioning of local boards of education.	17*	Medium
18. We need to provide programs to address the special needs of minority students and community members.	10*	High
19. We need to improve instructional programming for middle school-age students.	14	Medium
20. We need to improve school facilities to ensure the delivery of quality education to all children.	26*	Low
21. We need programs to improve students' higher order thinking skills.	10*	High
22. We need programs to improve adult literacy.	26*	Low
23. We need programs to improve the care and education of preschool children.	4*	High
24. We need programs that address the special needs of small, rural schools.	2	High
25. We need programs that address the special needs of urban schools.	13	Medium
26. We need programs that provide care for the children of public school students.	26*	Low
27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.	4*	High
28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.	15*	Medium
29. We need to study the use of technology as a means for improving the delivery of instruction to all children.	1	High
30. We need to improve educational services for all exceptional students.	26*	Low

Note: * = Tie

Rankings and Ratings of the FY 89 Educational Need Statements by the West Virginia State Caucus

Educational Need Statements	N.S. Rank	N.S. Rating
1. We need more community support of local public schools.	14*	Medium
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.	25*	Low
3. We need educational reforms at both the state and local levels.	14*	Medium
4. We need to improve career education programming/ career guidance services.	5	High
5. We need to improve vocational education.	7*	High
6. We need improved financial support for local schools.	1	High
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).	22*	Low
8. We need to improve sex education programming in K-12 schools.	25*	Medium
9. We need to improve teachers' working conditions.	14*	Medium
10. We need to improve the recruitment of highly talented individuals into the teaching profession.	6	High
11. We need to improve the involvement of parents/guardians in the education of their school-age children.	19	Medium
12. We need to improve students' mastery of basic skills.	2	High
13. We need special programs for at-risk youth in danger of dropping out of school.	11	Medium
14. We need to improve professional development programs for teachers and school administrators.	14*	Medium
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.	7*	High
16. We need to improve programs that enhance secondary students' motivation to learn.	12	Medium

West Virginia (continued)

Educational Need Statements	N.S. Rank	N.S. Rating
17. We need programs to enhance the functioning of local boards of education.	22*	Low
18. We need to provide programs to address the special needs of minority students and community members.	20*	Low
19. We need to improve instructional programming for middle school-age students.	25*	Low
20. We need to improve school facilities to ensure the delivery of quality education to all children.	3*	High
21. We need programs to improve students' higher order thinking skills.	13	Medium
22. We need programs to improve adult literacy.	25*	Low
23. We need programs to improve the care and education of preschool children.	20*	Low
24. We need programs that address the special needs of small, rural schools.	14*	Medium
25. We need programs that address the special needs of urban schools.	24	Low
26. We need programs that provide care for the children of public school students.	25*	Low
27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.	10	High
28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.	7*	High
29. We need to study the use of technology as a means for improving the delivery of instruction to all children.	3*	High
30. We need to improve educational services for all exceptional students.	25*	Low

Note: * = Tie

Appendices A-F

APPENDIX A

Appalachia Educational Laboratory
1989 Needs Assessment Project

NEED STATEMENTS

1. We need more community support of local public schools.
2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.
3. We need educational reforms at both the state and local levels.
4. We need to improve career education programming/career guidance services.
5. We need to improve vocational education.
6. We need improved financial support for local schools.
7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).
8. We need to improve sex education programming in K-12 schools.
9. We need to improve teachers' working conditions.
10. We need to improve the recruitment of highly talented individuals into the teaching profession.
11. We need to improve the involvement of parents/guardians in the education of their school-age children.
12. We need to improve students' mastery of basic skills.
13. We need special programs for at-risk youth in danger of dropping out of school.
14. We need to improve professional development programs for teachers and school administrators.
15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.
16. We need to improve programs that enhance secondary students' motivation to learn.
17. We need programs to enhance the functioning of local boards of education.
18. We need to provide programs to address the special needs of minority students and community members.

19. We need to improve instructional programming for middle school-age students.

20. We need to improve school facilities to ensure the delivery of quality education to all children.

21. We need programs to improve students' higher order thinking skills.

22. We need programs to improve adult literacy.

23. We need programs to improve the care and education of preschool children.

24. We need programs that address the special needs of small, rural schools.

25. We need programs that address the special needs of urban schools.

26. We need programs that provide care for the children of public school students.

27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.

28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.

29. We need to study the use of technology as a means for improving the delivery of instruction to all children.

30. We need to improve educational services for all exceptional students.

APPENDIX B

TASK #2: REQUEST FOR RECOMMENDATIONS: CONSULTANT TO ASSIST WITH NEEDS ASSESSMENT

Our Regional Lab contract with OERI requires that we periodically assess the educational needs of our four-state Region. The time to do this is once again upon us!

Over the years, AEL has used various approaches to needs assessment: mail surveys, state and regional conferences, files of information from state newspaper and journal articles, status reports by experts from member states, and focus groups of education leaders. For the 1989 needs assessment, we plan to use a combination of these approaches. Your participation is an integral part of this plan.

Another key component of our needs assessment plan for 1989 will be a consultant--one in each state--who will carry out two important tasks:

- Task 1: Each state consultant will facilitate a two-hour State Caucus session at the next Board meeting to secure your perceptions concerning the state's most pressing educational needs.
- Task 2: Each state's consultant will combine the information you provide with data from AEL records and other sources identified by the consultant to prepare a report on the status of the state's needs.

We would like to request your assistance today in identifying people from your state who might serve most effectively in this consultant role.

Please reflect upon the kinds of knowledge, skills, and information access that carrying out the above tasks will require. Then try to identify a few professionals in your state who seem best qualified as potential consultants for this job. Finally, please list the names (and how we can contact them) of three to five potential consultants whom you would recommend.

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APPENDIX C

Appalachia Educational Laboratory
1989 Needs Assessment Project

List of Needs Assessment State Consultants

State	NA State Consultant	Affiliation/Address
KY	Ed Ball, Jr.	President Professional Executive Services 1236 Meadow Lane Frankfort, KY 40601
TN	Dennie Smith	College of Education Memphis State University Memphis, TN 38152
VA	Yvonne Thayer	Radford City Schools 1612 Wadsworth Street Radford, VA 24143
WV	Karen Nickelson	WV Institute of Technology Box 41 Old Main Montgomery, WV 25136

APPENDIX D

Appalachia Educational Laboratory
1989 Needs Assessment Project

Orientation Session for NA State Consultants
AGENDA
Friday, July 7, 1989
Fourth Floor Conference Room

9:00 - 10:00 a.m.	Introduction to Session
(15 min.)	• Coffee/meet AEL project directors
(5 min.)	• Welcome (MLM)
(5 min.)	• Overview of day (MLM)
(25 min.)	• Explanation of task, including information regarding AEL; especially, needs assessment project (JRS)
(10 min.)	• Questions from the NA state consultants
10:00 - 12:00 p.m.	Simulation of Facilitation Sessions on 7/22/89
(45 min.)	• Explanation of NA group process and simulation of NA ranking activity (MLM)
(60 min.)	• Each facilitator "drives through" three need statements in 15 minutes (roughly the same ratio as at the 7/22 meeting)
(15 min.)	• Group discusses process/asks questions (this discussion could be continued after lunch)
12:00 - 1:00 p.m.	Lunch
1:00 - 2:00 p.m.	Simulation Wrapup and Final Report Expectations
(20 min.)	• Wrapup of simulation/processing (MLM)
(20 min.)	• AEL report requirements (paper copy, floppies, etc.), including due dates (MGM)
(20 min.)	• What happens between July 22, 1989, and September 29, 1989 (MLM)
	• AEL contact person for assistance (MLM)
2:00 - 3:00 p.m.	Tour of AEL Resource Center and Demonstration of CD-ROM (MS)
3:00 p.m.	Adjourn

Educational Need Statements for West Virginia, Page ____

EDUCATIONAL NEED STATEMENT	RANKING OF IMPORTANCE	ASSUMPTIONS ABOUT THE STATE'S AWARENESS OF AS WELL AS CAPABILITY AND READINESS TO ADDRESS THE NEED STATEMENT			OPPORTUNITIES AND/OR RESOURCES THAT COULD HELP THE STATE ADDRESS THE NEED STATEMENT	LIKELIHOOD THAT THE STATE WILL USE ASSISTANCE FROM AEL TO ADDRESS THE NEED STATEMENT
• The educational need statements are derived from the 1985 AEL NA process, the 1987 AEL NA survey, the 1989 AEL Resource Center "hot" topics, and the 1989 AEL information base scanning system.	Following the need statements ranking activity, use • High, • Medium, or • Low for each need statement.	1. AWARENESS • High • Medium • Low	2. CAPABILITY • High • Medium • Low	3. READINESS • High • Medium • Low	For example: • Favorable climate in state • Pertinent legislation • Available resources, including AEL • Forthcoming R & D products	Use: • High Likelihood • Moderate Likelihood • Small Likelihood
NS No. ____		1. 2. 3.				

APPENDIX E

6/23/89

APPENDIX F

OVERVIEW OF JULY 22, 1989, STATE CAUCUS MEETING AND SUBSEQUENT NEEDS ASSESSMENT PROCESS

The July State Caucus meetings of the AEL Board of Directors have as purpose securing Board members' perceptions concerning the states' most pressing educational needs. The meetings will be facilitated by external consultants: Ed Ball, Jr. (KY); Dennie Smith (TN); Yvonne Thayer (VA); and Karen Nicholson (WV). AEL staff will assist the consultants, as needed. The consultants will lead members through a systematic process developed by staff. The process will result in the following outcomes: (1) rankings for a set of 30 need statements derived by AEL staff; (2) ratings of the state's awareness, capability, and readiness to address the highest rated need statements; (3) listing of opportunities and resources that could help the state address the need statements; and (4) rating of the likelihood that the state will use AEL assistance to address the need statement.

The consultants will use the outcomes of the State Caucus meetings as a primary source for updating the 1986 AEL education status report for each state. Other sources could include education legislation, policy proposals and analyses, reports of special studies, and so forth. The updated status reports will be provided to the State Caucuses for use in planning future AEL work in the states.

The timeline below provides a listing of the master needs assessment activities and the schedule for completing those activities.

Timeline for 1989-90 AEL Needs Assessment Activities

	1989				1990			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
State Caucus suggest possible consultants		Δ						
Staff identify consultants		Δ						
Staff convene consultants		Δ						
Consultants meet with state caucus			Δ					
Consultants prepare draft status reports			X—Δ					
Staff review draft reports and return to consultants			Δ					
Consultants provide final reports			▲					
Staff share reports with Board				Δ				
Future Committee use report				Δ				
Executive Committee use report				Δ				
State caucuses use report				X— ongoing	—	—	—	—
Management Team use report				X—	—Δ	—	— ongoing	—

Appendix G

EDUCATION IN KENTUCKY: A STATUS REPORT

Edward E. Ball, Jr., Ed.D.

Frankfort, Kentucky

September 1989

Prepared for

Appalachia Educational Laboratory
Post Office Box 1348
Charleston, WV 25325

EDUCATION IN KENTUCKY: A STATUS REPORT

Edward E. Ball, Jr., Ed.D.
September 1989

The status of the educational program in the Commonwealth of Kentucky is in a total state of transition. After the June 8, 1989, Kentucky Supreme Court's decision that the system of schools in Kentucky is unconstitutional and must be dramatically changed by the Kentucky General Assembly, it is only speculative as to what the outcomes will be.

Kentucky, by the challenges of this landmark decision, has a most unique opportunity to move its educational programs to become a model for the nation. Only time will tell if the Governor and the General Assembly, with the support of the people, will seize the opportunity and write a chapter in Kentucky's history that will be viewed as exemplary.

This report on the status of education in Kentucky was researched and written for the Appalachia Educational Laboratory (AEL) in Charleston, West Virginia. The report focuses upon six areas: (1) general demography, (2) educational demography, (3) support and control of public elementary and secondary education, (4) role of higher education in public elementary and secondary education, (5) trends in public elementary and secondary education, and (6) R & D resources available to support elementary and secondary education.

Thanks and appreciation is extended to members of the staff of the Appalachia Educational Laboratory and the Kentucky Department of Education for providing pertinent information for the report.

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General Demography

In Kentucky one finds a land of contrasts of very extreme proportions. This phenomenon is exemplified in the contrasts between the beautiful wooded mountains of Eastern Kentucky and the natural grazing fields of the Bluegrass region; the ugly scarred mining strips of Western Kentucky; the rich industrialists and their lush properties sprinkled throughout Eastern Kentucky and the state-at-large; the ever-growing pockets of rural and inner city poverty; and the advanced nature of the progress of Kentucky's industrialized areas and the depressed state of the Appalachian Region.

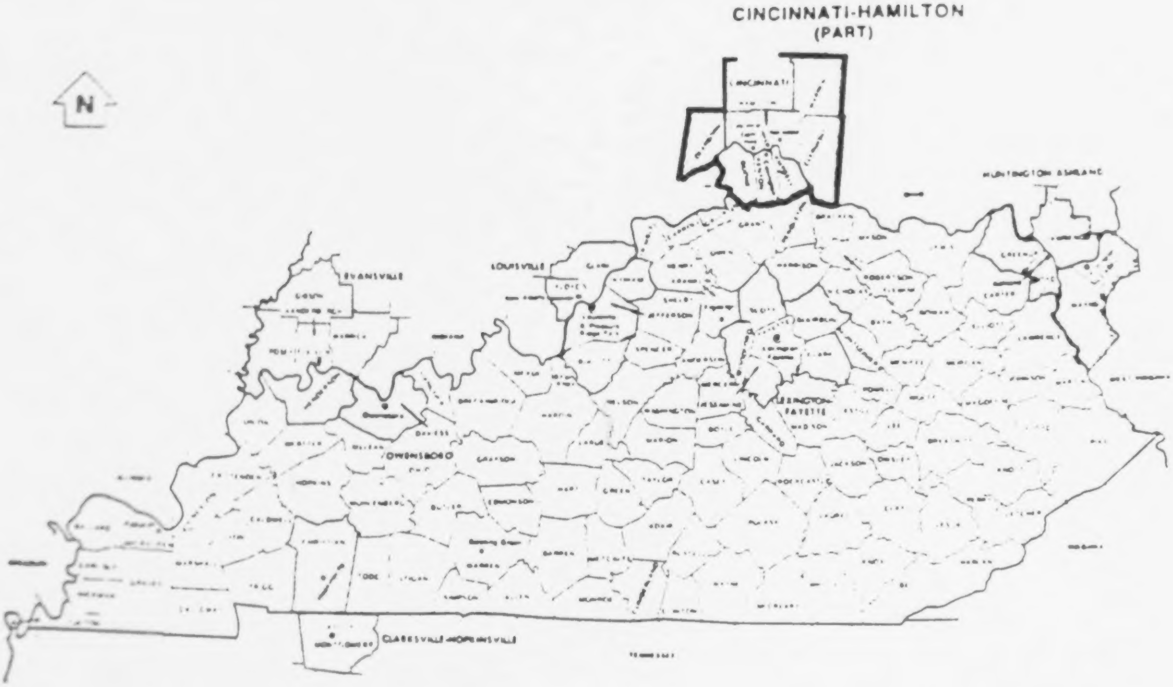
Population

Kentucky is basically a rural state with its larger urban areas being shared with other states. The largest metro area is the Northern Kentucky area which is a major part of the Greater Cincinnati, Ohio, region. Louisville, the state's largest city, shares it urban base with cities in Southern Indiana. The fastest growing urban area is the Clarksville, Tennessee, and Hopkinsville, Kentucky, area. Only 45 percent of Kentucky's population lives in urban areas of the state.(2)

Therefore, Kentucky shares several of its major population centers with urban areas of surrounding states. This factor means that Kentucky's growth economically is determined (to some degree) by what transpires in other states. Figure 1 shows the shared population centers.

The population of Kentucky at the count of the 1980 census(13) was 3,660,257. At that time, 49.1 percent lived in rural areas as compared with 45 percent today as stated above.

Figure 1


CINCINNATI-HAMILTON
(PART)
N
CINCINNATI
HUNTINGTON-ASHLAND
EVANSVILLE
LOUISVILLE
OWENSBORO
LEXINGTON-FAYETTE
CLARKSVILLE-HOPKINSVILLE
TENNESSEE

The population projections for Kentucky are as follows:(3)

1990	3,847,018
1995	3,959,645
2000	4,053,537
2010	4,185,811

The data from the University of Louisville's Urban Studies Center show a very small increase in population projected over the next 30 years. During the years 1987 to 1989, the Black population has increased only .2 percent and is estimated to be less than 300,000 today.

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Personal Income

In Table 1, the median household income, number of women in the workforce, and housing values, ranked in the nation 45th, 49th, and 47th respectively, show Kentucky's relative low economic status and the high level of anticipated poverty.

The 1980 Census data reported that the number of households reporting income was bi-modal in that the high peaks appeared in the categories of less than $5,000 and $10,000 to $14,999. The data point out the relative poverty of the Commonwealth. The percentage below poverty for the households in Kentucky was 18.4 percent compared to 12.5 percent for the United States.

Table 1

Income and Poverty Status for Kentucky and U. S.: 1979(12)

	Kentucky		U.S.	
Income (Amount)	Households (Number)	Families (Number)	Households (Number)	Families (Number)
Total	1,263,702	986,831	80,433,749	58,975,810
Less than $5,000	222,504	111,669	10,602,495	4,297,235
$5,000 to $7,499	128,591	89,295	6,427,456	3,652,744
$7,500 to $9,999	116,145	84,911	6,391,051	4,112,637
$10,000 to $14,999	202,481	162,322	12,352,784	8,651,779
$15,000 to $19,999	177,379	152,329	11,378,390	8,930,918
$20,000 to $24,999	140,811	127,652	9,972,264	8,413,990
$25,000 to $34,999	172,678	160,962	12,712,171	11,325,422
$35,000 to $49,999	70,893	66,534	6,908,694	6,260,836
$50,000 or More	32,220	31,157	3,688,444	3,330,526
Median (dollars)	13,983	16,399	16,830	19,908
Mean (dollars)	17,049	19,178	20,373	23,177
Poverty Status	**Persons**	**Families**	**Persons**	**Families**
All Income Levels	3,564,252	986,831	220,802,037	58,975,810
Income Below Poverty Level	656,696	147,312	27,527,858	5,646,520
Percent Below Poverty Level	18.4	14.9	12.5	9.6

In Table 2, the 1987 data show that 11.2 percent of Kentucky's population is over 65 which ranks 26th in the United States. The percentage of population under 18 years of age in 1987 was 29.6 and this ranked 14th. This presents an interesting trend that there are both large numbers of youth to be educated and senior citizens that require special services. Both ends of the age spectrum will require increasing amounts of Kentucky's resources now and in the future.

Married couple households ranked 4th in the U. S. at 65.4 percent which shows the stability of the Kentucky family structure compared to the nation which by-and-large has ever-growing levels of divorce and general instability.

Table 2

Selected Profile Data for Kentucky, 1987,
Including Population and National Rank(12)

1970 Population	*	3,220,711	
1980 Population	23rd	3,660,000	
1990 Population (Projected)		4,073,400	
1980 Black Population	22nd	259,477	7.1%
1987 Black Population	*	275,940	7.3%
Hispanic Population	36th	27,406	
Born in another country	49th	*	0.9%
Born in another state	49th	*	20.6%
Percentage of Population over 65	26th	11.2%	
Percentage of Population under 18	14th	29.6%	
Median Age	34th	29.1 years	
1987 Median Age	*	31.0 years	
Adults completed high school	50th	51.9%	
Adults completed college	48th	11.1%	
Married couple households	4th	65.4%	
Owner-occupied housing	15th	70%	
Median household income	45th	$13,965	($21,160 in 1987)
Women in the labor force	49th	43.6%	
Housing value	47th	$39,400	

The ranking of personal income per capita in Kentucky and the United States is shown in Table 3. In 1987, the personal income difference in Kentucky and the United States was $3,422 per capita which ranked 41st in the nation.

Table 3

Personal Income in Kentucky and U. S.: 1967-1987(12)

	Total Personal Income (000,000)		Personal Income Per Capita			
Year	Kentucky	U.S.	Kentucky	U.S.	Kentucky as % of U.S.	Rank
1969	$9,357	$766,522	$2,926	$3,808	76.8	43
1970	10,148	825,534	3,141	4,051	77.5	43
1971	11,011	888,536	3,338	4,296	77.7	44
1972	12,195	976,181	3,655	4,665	78.3	44
1973	13,793	1,095,289	4,091	5,182	78.9	43
1974	15,586	1,204,899	4,561	5,648	80.8	43
1975	16,926	1,308,482	4,880	6,073	80.3	46
1976	19,058	1,447,002	5,398	6,651	81.2	45
1977	21,406	1,602,863	5,988	7,294	82.1	42
1978	24,024	1,806,968	6,652	8,136	81.8	43
1979	26,912	2,028,510	7,386	9,033	81.8	43
1980	29,401	2,254,076	8,022	9,919	80.9	43
1981	32,738	2,514,231	8,907	10,949	81.3	42
1982	34,281	2,663,432	9,277	11,480	80.8	43
1983	35,340	2,834,385	9,513	12,098	78.6	44
1984	38,732	3,101,163	10,403	13,114	79.3	43
1985	40,168	3,317,239	10,775	13,895	77.5	44
1986	41,985	3,521,393	11,268	14,606	77.1	44
1987	44,945	3,768,125	12,059	15,481	77.9	41

Employment

Kentucky's unemployment rates over the years have evolved from below the national average in the late 1970s to consistently higher in the decade of the 1980s. This pattern can be viewed in Table 4. In the past six years, Kentucky's rate has averaged over two percent above the national average. This is indicative of problems in the economy of the state.

Table 4

Unemployment Rate for Kentucky and U. S.:
1970-1987 (Percent)(3)

Year	Kentucky	U.S.
1970	4.4	4.9
1971	5.2	5.9
1972	5.9	5.6
1973	3.7	4.9
1974	4.5	5.6
1975	7.3	8.5
1976	5.6	7.7
1977	4.7	7.1
1978	5.2	6.1
1979	5.6	5.8
1980	8.0	7.1
1981	8.4	7.6
1982	10.6	9.7
1983	11.7	9.6
1984	9.3	7.5
1985	9.5	7.2
1986	9.3	7.0
1987	8.8	6.2

Kentucky's profile in the area of percentage of workers in major job categories shows manufacturing to be the highest at 22.5 percent, followed by retail/wholesale at 20.2 percent. The most revealing fact, however, is the relationship of the major job categories to the United States index. The list shows agriculture, mining, forestry, and fishing at the top in proportion to the U. S. data and professional services and public administration at the bottom. This data, displayed in Table 5, can be interpreted to say that Kentucky has fewer professional service needs of the higher technology society than the nation-at-large, which reflects the rather lower poverty status and lower number professional activities in the state.

Table 6 provides data on sources of personal income in Kentucky and the percent of the total income compared in years 1983 and 1987. Total earnings in the Kentucky workplace increased about three percent and the percentage of the totals remained rather stable.

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Table 5

Percent of Kentucky's Workers in Major Job Categories and the Relationship to the United States Index, 1987(2)

	% OF WORKERS	U.S. INDEX
AGRICULTURE, MINING, FORESTRY, FISHING	8.5%	213
CONSTRUCTION	6.1%	103
MANUFACTURING	22.5%	100
TRANSPORTATION, COMMUNICATION	7.3%	100
RETAIL, WHOLESALE	20.2%	99
FINANCE, INSURANCE, REAL ESTATE	4.6%	77
BUSINESS, REPAIR, PERSONAL SERVICE	6.8%	81
PROFESSIONAL SERVICES	18.9%	93
PUBLIC ADMINISTRATION	5.1%	96

Table 6

Sources of Personal Income in Kentucky: 1983 and 1987 by Place of Work - Not Residence Adjusted(3)

	1983		1987	
Industry	Amount (000.000)	% of Total	Amount (000.000)	% of Total
Total Earnings by Place of Work	$24,603.55	100.0	$31,888.62	100.0
Farm	445.29	1.8	926.40	2.9
Agricultural Services, Forestry, Fishery, and Other	134.29	0.6	159.13	0.5
Mining	1,604.08	6.5	1,636.91	5.1
Contract Construction	1,387.13	5.6	1,928.95	6.0
Manufacturing	5,771.41	23.5	7,144.34	22.4
Transportation, Communications and Public Utilities	1,868.75	7.6	2,352.87	7.4
Wholesale and Retail Trade	3,905.15	15.9	4,931.76	15.5
Finance, Insurance, and Real Estate	1,040.62	4.2	1,418.69	4.5
Services	4,134.12	16.8	6,042.59	18.9
Government	4,312.71	17.5	5,346.98	16.8

Table 6 data show the relative stability of the state and may also indicate that the state is not growing with the economic trends of other areas of the nation where services, trade, and manufacturing appear to be moving at a faster rate.

Educational Demography

Elementary and Secondary Education

There were 637,902 students enrolled in Kentucky public elementary schools during the 1988-89 school year. This shows a decline of 15,413 students over the past five years. The student population was housed in 1,064 public elementary schools and 314 public elementary schools. In the nonpublic sector, there were 65,088 students enrolled in 550 elementary and secondary schools. The nonpublic student population has also declined in the past five years by 7,577 students. Table 7 gives more specific information on the actual number of schools and their enrollments.(8)

Table 7

Summary Comparisons of School Enrollments in Kentucky for 1983-84 and 1988-89

		SCHOOLS			ENROLLMENT		
		'83-84	'88-89	Change	"83-84	'88-89	Change
Elementary	Public	1050	1064	+14	431,243	433,757	+2,514
	Nonpublic	410	335	-25	53,777	49,587	-4,190
	Total	1460	1399	-61	485,020	483,344	+1,676
Secondary	Public	308	314	+6	216,171	204,145	-12,026
	Nonpublic	114	115	+1	18,888	15,501	- 3,387
	Total	422	429	+7	235,059	219,646	-15,413
Elem/Sec Combined	Public	1358	1378	-61	647,414	637,902	- 9,512
	Nonpublic	524	450	+ 7	72,665	65,038	-7,577
	Total	1882	1828	-54	720,079	702,990	-17,089

Table 8,(8) showing school enrollments by size of school, indicates that a large portion of Kentucky students attend small schools. This is true of both public and nonpublic students and their schools. Table 9 also shows enrollments and adds percentages of the state enrollment by each school size category and the number of school systems or districts in each size category.

There are currently 177 school districts in Kentucky of which 120 are county districts and 57 are independent school districts. The data show a continuing problem of Kentucky with a large percentage of students attending small schools and the existence of small districts. In both cases, the normal result is to have an excessive cost per pupil and the difficulty of offering the needed comprehensive program offerings required to provide the students with sufficient educational opportunity.

Table 9

Number and Percent of Enrollment for Various Size of School Systems(8)

Enrollment Size	Number of School Systems	Approximate Percent of Statewide Enrollment
30,000 +	2	18
8,000 - 30,000	11	16
2,500 - 8,000	72	49
2,500 or less	92	17
TOTAL	177	100

Data for the 1988-89 school year report that the racial composition of Kentucky schools continues to be predominately white. The following is a breakdown by racial origin:(8)

Table 8

School Enrollment by Size, School Year 1988-89

01/12/89 PN-S01273

STATE TOTALS

	ELEMENTARY						SECONDARY						TOTAL					
	PUBLIC		N-PUBLIC		TOTAL		PUBLIC		N-PUBLIC		TOTAL		PUBLIC		N-PUBLIC		TOTAL	
SCHOOL SIZE	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR	SCH	ENR
0001-0099	45	2254	164	5974	209	8228	37	1109	73	2127	110	3236	82	3363	237	8101	319	11464
0100-0199	139	21975	61	9124	200	31099	19	2874	13	1772	32	4646	158	24849	74	10896	232	35745
0200-0299	182	45329	43	10270	225	55599	24	5933	7	1661	31	7594	206	51262	50	11931	256	63193
0300-0399	168	58027	16	5759	184	63786	24	8350	3	1082	27	9432	192	66377	19	6841	211	73218
0400-0499	185	82673	24	10603	209	93476	19	8333	4	1829	23	10162	204	91206	28	12432	232	103638
0500-0599	153	84399	7	3803	160	88202	26	14281	1	536	27	14817	179	98680	8	4339	187	103019
0600-0699	84	53938	5	3247	89	57185	27	17635	4	2521	31	20156	111	71573	9	5768	120	77341
0700-0799	52	38973	1	732	53	39705	26	19145	2	1500	28	20645	78	58118	3	2232	81	60350
0800-0899	24	20220			24	20220	23	19406			23	19406	47	39626			47	39626
0900-0999	11	10372			11	10372	19	18060			19	18060	30	28432			30	28432
1000-1099	9	9348			9	9348	12	12553	1	1061	13	13614	21	21901	1	1061	22	22962
1100-1199	1	1153			1	1153	15	17170			15	17170	16	18323			16	18323
1200-1299							10	12643			10	12643	10	12643			10	12643
1300-1399	2	2606			2	2606	7	9265			7	9265	9	11871			9	11871
1400-1499							7	9998	1	1412	8	11410	7	9998	1	1412	8	11410
1500-1799	1	1633			1	1633	10	16098			10	16098	11	17731			11	17731
1800-2099							6	11292			6	11292	6	11292			6	11292
2100-2399																		
2400-OVER																		
Total	1056	433100	321	49512	1377	482612	311	204145	109	15501	420	219646	1367	637245	430	65013	1797	702258

Racial Origin	Public %	Nonpublic
White	90.1	90.7
Black	9.3	6.3
Hispanic	0.2	1.4
Asian	0.4	1.5
American Indian	0.04	0.1

During the 1988-89 school year, the schools of Kentucky employed 41,630 certified staff. Table 10 exhibits the specific breakdown for each role group and the percentage of males and females. Females continue to dominate the teaching profession, especially at the elementary level, and males dominate the administrative positions even more with the greatest dominance in the position of superintendency. Affirmative action programs have not been successful in bringing a better balance because the nonwhite percentage five years ago was 4.7 and the past year showed a decrease to 4.3.

Table 10

Professional Staff in Kentucky Schools 1988-89(8)

Staff	Total Males/Females	Percent	
		Female	Nonwhite
Superintendents	177	2.8	-0-
Other central Adm.	652	18.1	1.5
Principals	1,222	18.3	3.5
Assistant Principals	463	21.8	7.8
Elem. Teachers	22,095	87.4	4.5
Sec. Teachers	11,162	58.2	4.0
Itinerant Teachers	2,949	66.6	4.4
Guidance	1,020	70.2	6.4
Psychology	127	72.4	2.4
Librarians/AV	1,133	96.9	2.7
Consultants/superv.	548	61.1	6.4
Other	259	69.5	8.1
Total Certified	41,630	73.6	4.3

In 1988-89 Kentucky ranked 33rd among the states in the average teacher salary with the average salary at $24,933, which is an increase of 19 percent from the 1985-86 level. Since salary level of teachers is linked to the amount of graduate training attained, Kentucky teachers show almost 80 percent have a master's degree or its equivalent.(8)

In the 1988-89 school year, there were 39,849 students graduating from the Kentucky public high schools. Of these, there were 54 percent enrolling in institutions of higher education. This represented a 12 percent increase from the 1983-84 school year. However, this was accompanied by a drop in the enrollment of Kentucky high school graduates in other postsecondary programs from 10 percent in 1983-84 to 8.8 percent in 1988-89.(8)

Kentucky historically had very low ranking nationally in the area of adult literacy. The Kentucky 5th Congressional District has ranked last for several years in the nation with the lowest rate of persons holding a high school diploma or its equivalent. The same area also ranks 4th from the bottom in average annual income per capita in the nation, showing that there is a strong correlation between education and income.(8)

Correlated strongly with these statistics on low holding power of the schools and high adult literacy is the high dropout rates shown by Kentucky schools. In 1988, only 67.8 percent of those who entered high school in the ninth grade actually graduated.(8)

The Kentucky policy board members of the Appalachia Educational Laboratory, through a needs assessment in July 1989, gave high priority to the development of special programs for at-risk youth who are in danger of dropping out of school. Many of these youth have strong remediation needs in the communication skills.(1)

In 1984, the Kentucky Department of Education developed the Kentucky Essential Skills Test (KEST) for assessing the achievement of students in grades three, five, seven, and ten. The testing process was designed to test a set of specific basic skills identified for each grade that was mandated into the prescribed curriculum. Although the total test development program appeared to have some merit in the beginning, the program and its data remained suspect and full credibility of the results was never achieved.

Prior to KEST, Kentucky used the California Test of Basic Skills and has returned to the CTBS for the 1988-89 school year.

A few general conclusions drawn from Table 11 show that the total battery percentages of students at or above the national norms fall considerably at grades five and ten. Significant is the drop of reading comprehension percentages at grade ten. This may indicate that Kentucky should explore why these trends in the existing data occur in order to improve the teaching and learning, especially beyond grade three.

According to the data in Table 12, which gives the average ACT Kentucky scores, the Commonwealth's students have taken a rather severe drop with the 1988-89 test results. Approximately 61 percent of the state's high school graduates took the ACT. Only 10 percent took the SAT so the SAT data are less significant and were not available for this report.

Kentucky ACT scores have remained below the National Scores during the past decade with the gap widening the past three years.

Table 11

Kentucky Student Achievement Trends, 1986-88, Grades 3, 5, 7, 10 Percent at or above the National Norm

Grade	Year	Reading Compre.	Writing Total	Math Total	Total Battery	Spelling
3	'86	62.8	57.3	59.3	61.4	56.7
	'87	61.3	59.5	59.8	61.4	56.7
	'88	61.7	59.7	60.2	62.5	61.4
5	'86	52.5	57.0	59.5	55.3	54.6
	'87	52.6	57.5	60.9	56.0	55.5
	'88	53.1	57.5	60.8	56.2	56.1
7	'86	55.4	58.5	58.1	57.0	54.5
	'87	56.1	59.6	59.2	57.9	55.4
	'88	57.0	60.1	59.8	58.5	56.0
10	'86	47.7	56.9	55.3	54.9	53.7
	'87	47.2	57.1	55.9	54.7	53.4
	'88	46.8	57.0	55.8	54.5	53.1

Source: Kentucky Essential Skills Test Statewide Testing Results, Kentucky Department of Education, Spring, 1988.

Table 12

Average ACT Scores for Kentucky High School Students Compared to the National Score from 1978 to 1989(8)

Year	Kentucky Score	National Score
'78-'79	1[illegible].7	18.6
'79-'80	17.7	18.5
'80-'81	17.6	18.5
'81-'82	17.5	18.4
'82-'83	17.4	18.3
'83-'84	17.9	18.5
'84-'85	17.9	18.8
'85-'86	18.1	18.8
'86-'87	18.3	18.7
'87-'88	18.2	18.8
'88-'89	17.8	18.6

Postsecondary Education in Kentucky

Postsecondary educational opportunities are provided in Kentucky through 143 institutions of higher education and business-vocational-technical schools or centers. During the fall of 1988, the enrollment total in the state-supported and independent colleges and universities was 151,926 students. Tables 13 and 14 present the detailed figures for fall enrollments of the 1985-88 academic school years for state-supported universities, community colleges, and independent senior and junior institutions.(7)

The Kentucky state-supported universities have grown in student enrollment by 10,988 students in the past three years, community colleges by 9,296, and independent institutions by 1,904 students in the same timeframe, respectively. The growth pattern in enrollments has been consistent throughout this period in the history of Kentucky higher education.(7)

A review of Table 15 presents the distributions of the degree program graduates at the Kentucky institutions of higher education. This shows a total of 20,590 graduates. Of these 1,719 degrees were awarded in elementary education. Secondary education degrees were not available because of the content orientation in the major and minor areas of preparation.(5)

Table 13

Fall Enrollments 1985-1988, State-Supported Institutions

	1985			1986			1987			1988		
	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL
STATE- SUPPORTED UNIVERSITIES												
EASTERN KENTUCKY UNIVERSITY	9,751	2,478	12,229	9,912	2,825	12,737	9,876	3,223	13,099	10,216	3,448	13,664
KENTUCKY STATE UNIVERSITY	1,118	894	2,012	1,218	987	2,205	1,204	901	2,105	1,259	963	2,222
MOREHEAD STATE UNIVERSITY	4,146	1,549	5,695	4,147	1,747	5,894	4,702	1,788	6,490	5,589	1,790	7,379
MURRAY STATE UNIVERSITY	5,569	1,725	7,294	5,317	1,756	7,073	5,330	2,046	7,376	5,712	1,916	7,628
NORTHERN KENTUCKY UNIVERSITY	4,623	4,074	8,697	4,652	4,009	8,661	4,709	4,311	9,020	5,052	4,445	9,497
UNIVERSITY OF KENTUCKY	16,211	4,755	20,966	16,415	4,825	21,240	16,887	5,574	22,461	17,431	5,393	22,824
UNIVERSITY OF LOUISVILLE	11,440	8,656	20,096	11,597	9,113	20,710	11,681	9,406	21,087	12,053	9,848	21,901
WESTERN KENTUCKY UNIVERSITY	8,110	3,149	11,259	8,476	3,781	12,257	9,308	4,212	13,520	9,899	4,222	14,121
TOTAL UNIVERSITIES	60,968	27,280	88,248	61,734	29,043	90,777	63,697	31,461	95,158	67,211	32,025	99,236
COMMUNITY COLLEGES												
ASHLAND COMMUNITY COLLEGE	986	456	1,442	977	1,014	1,991	1,081	1,205	2,286	1,172	1,442	2,614
ELIZABETHTOWN COMMUNITY COLLEGE	1,032	1,017	2,049	1,028	1,063	2,091	1,163	1,183	2,346	1,213	1,504	2,717
HAZARD COMMUNITY COLLEGE	326	281	607	415	361	776	442	535	977	554	488	1,042
HENDERSON COMMUNITY COLLEGE	670	1,189	1,859	473	572	1,045	465	651	1,116	552	687	1,239
HOPKINSVILLE COMMUNITY COLLEGE	474	468	942	573	495	1,068	595	746	1,341	646	1,097	1,743
JEFFERSON COMMUNITY COLLEGE	2,337	4,409	6,746	2,400	4,596	6,996	2,619	5,131	7,750	2,827	5,376	8,203
LEXINGTON COMMUNITY COLLEGE	1,157	1,381	2,538	1,227	1,360	2,587	1,500	1,495	2,995	1,810	1,591	3,401
MADISONVILLE COMMUNITY COLLEGE	402	928	1,330	403	953	1,356	483	1,031	1,514	679	1,145	1,824
MAYSVILLE COMMUNITY COLLEGE	395	371	766	390	337	727	399	380	779	381	492	873
OWENSBORO COMMUNITY COLLEGE	-			385	712	1,097	490	1,040	1,530	663	1,024	1,687
PADUCAH COMMUNITY COLLEGE	846	856	1,602	866	1,139	2,005	1,002	1,296	2,298	1,155	1,289	2,444
PRESTONSBURG COMMUNITY COLLEGE	710	633	1,343	758	747	1,505	976	1,014	1,990	1,165	923	2,088
SOMERSET COMMUNITY COLLEGE	644	517	1,161	680	622	1,302	825	654	1,479	889	696	1,585
SOUTHEAST COMMUNITY COLLEGE	335	487	822	394	631	1,025	539	836	1,375	694	909	1,603
TOTAL COMMUNITY COLLEGES	10,314	13,453	23,767	10,967	14,602	25,569	12,579	17,197	29,776	14,400	18,663	33,063
TOTAL STATE-SUPPORTED INSTITUTIONS	71,282	40,733	112,015	72,701	43,645	116,346	76,276	48,658	124,934	81,611	50,688	132,299

Table 14

Fall Enrollments 1985-1988, Independent Institutions

	1985			1986			1987			1988		
	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL	FULL-TIME	PART-TIME	TOTAL
SENIOR INSTITUTIONS												
ALICE LLOYD COLLEGE	513	33	546	566	32	598	510	24	534	475	32	507
ASBURY COLLEGE	943	37	980	895	44	939	886	39	925	954	33	987
BELLARMINE COLLEGE	1,074	1,590	2,664	1,062	1,602	2,664	1,113	2,511	3,624	1,158	2,187	3,345
BEREA COLLEGE	1,500	66	1,566	1,518	69	1,587	1,543	78	1,621	1,458	64	1,522
BRESCIA COLLEGE	403	341	744	403	302	705	424	301	725	426	240	666
CAMPBELLSVILLE COLLEGE	573	75	648	529	86	615	506	154	660	544	182	726
CENTRE COLLEGE	796	8	804	804	10	814	867	14	881	851	8	859
CUMBERLAND COLLEGE	1,855	239	2,094	1,688	239	1,927	1,700	231	1,931	1,713	191	1,904
GEORGETOWN COLLEGE	921	394	1,315	930	432	1,362	937	487	1,424	972	495	1,471
KENTUCKY CHRISTIAN COLLEGE	494	42	536	508	30	538	503	64	567	527	40	567
KENTUCKY WESLEYAN COLLEGE	618	190	808	639	152	791	622	152	774	641	125	766
LINDSEY WILSON COLLEGE	466	169	635	588	298	886	741	289	1,030	804	256	1,060
PIKEVILLE COLLEGE	460	140	600	610	163	773	692	132	824	797	118	915
SPALDING UNIVERSITY	467	671	1,138	498	656	1,154	462	715	1,177	422	719	1,141
THOMAS MORE COLLEGE	580	587	1,167	565	555	1,120	563	532	1,095	613	484	1,097
TRANSYLVANIA UNIVERSITY	782	74	856	870	100	970	935	107	1,042	926	115	1,041
UNION COLLEGE	459	447	906	592	408	1,000	634	377	1,011	676	372	1,048
TOTAL SENIOR INSTITUTIONS	12,904	5,103	18,007	13,248	5,155	18,403	13,638	6,207	19,845	13,957	5,670	19,627
JUNIOR INSTITUTIONS												
LEES COLLEGE	276	122	398	266	117	383	261	143	404	298	134	432
MIDWAY COLLEGE	247	67	314	253	107	360	221	114	335	278	118	396
SAINT CATHARINE COLLEGE	134	112	246	127	103	230	167	98	265	171	95	266
SUE BENNETT COLLEGE	302	101	403	315	137	452	314	209	523	311	240	551
TOTAL JUNIOR INSTITUTIONS	959	402	1,361	961	464	1,425	963	564	1,527	1,058	587	1,645
TOTAL INDEPENDENT INSTITUTIONS	13,863	5,505	19,368	14,209	5,619	19,828	14,601	6,771	21,372	15,015	6,257	21,272

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Table 15

Kentucky College and University Degree Distributions
Conferred Between July 1, 1987, and June 30, 1988(6)

LEVEL	STATE-SUPPORTED INSTITUTIONS	INDEPENDENT INSTITUTIONS	BUSINESS COLLEGES	THEOLOGICAL SEMINARIES	TOTAL INSTITUTIONS
ASSOCIATE	3,483	446	308	0	4,237
Row Percent	82	11	7	0	
BACHELOR'S	9,515	2,529	0	0	12,044
Row Percent	79	21	0	0	
MASTER'S & SPECIALIST'S	2,770	382	0	31	3,183
Row Percent	87	12	0	1	
FIRST-PROFESSIONAL	683	0	0	204	887
Row Percent	77	0	0	23	
DOCTORAL	205	4	0	30	239
Row Percent	86	2	0	13	
TOTAL DEGREES	16,656	3,361	308	265	20,590
Row Percent	81	16	1	1	

A variety of academic fields are represented in Table 15. At the associate degree level of state-supported and independent institutions, liberal studies was the most popular degree preparing students to transfer to four-year programs, followed by nursing and business. Over a third, 38 percent, of the bachelor's degrees were conferred in business and management, and education. A high proportion of the master's and specialist's degrees was in education at 47 percent and with management a distant second at 9 percent. Of the first professional degrees awarded by state-supported universities, 54 percent were in law, 31 percent in medicine, 13 percent in dentistry, and 2 percent in pharmacy. Doctoral degrees were most often awarded in education, life sciences, and business.(6)

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Support and Control of Public Elementary and Secondary Education

In Kentucky, the ultimate control for public and nonpublic elementary and secondary education is in the purview of the Kentucky legislature. Through the laws as interpreted by the constitutional intent, the legislature has responsibility for control and governance of the schools.

Kentucky Department of Education(8)

The Kentucky Department of Education was created to administer the educational process for the state and carry out the legislative intent of the laws passed by the Kentucky General Assembly. The Department also provides a service and technical assistance role in supporting the elementary and secondary schools.

With an elected Superintendent of Public Instruction and a State Board of Education, appointed by the Governor, the Commonwealth has public input through representative government. The Superintendent of Public Instruction, the chief executive of the Kentucky Department of Education, leads the Department in accomplishing its goals and carrying out its functions of monitoring and service.

The Department of Education has five major offices or divisions that support the Superintendent in the management of the Kentucky schools. There are the following offices: Office of School Administration and Finance, Office of Internal Administration, Office of Instruction, Office of Education for Exceptional Children, and the Office of Research and Planning. Each has a clear division of labor in the administration of the total educational process.

The Office of Instruction directly administers the instructional programs for Kentucky through the divisions of accreditation and program audit, teacher education and certification, program development, student services, curriculum and staff development, compensatory education, and support services.

The State Board of Education has 13 voting members selected from each of the seven Supreme Court districts and six members from the state-at-large. The Executive Director of the Council of Higher Education is an ex officio member of the Board. The primary responsibility of the State Board of Education is to provide appropriate policies and regulations to direct the Kentucky Department of Education in its administration of the schools of the Commonwealth.

The governance of the State Board of Education focuses upon such responsibilities as regulation of the minimum courses of study for graduation, accreditation of all common schools, school census, school building construction and maintenance; transportation services, regulation of private schools, salaries, and schedules of local school personnel.

Local Education Agencies(8)

The 177 local school districts are each headed by a local superintendent appointed by a five-person local board of education. Local board members can appoint a superintendent to serve from one to four years. The members of the local boards of education are elected at-large in the independent districts and from geographically defined areas in the county school districts. Members are elected for four-year terms.

The local superintendent, as the chief executive officer of the local board of education, must recommend all personnel appointments, dismissals, promotions, and transfers. Operating within the Kentucky school laws, the local board of education has control of the operation of the local schools. This control is established through a set of policy statements and local regulations that are developed and approved by the local board.

Kentucky School Laws

Kentucky school laws, including constitutional provisions and statutes, with interpretation by the courts and opinions of the Office of Attorney General, guide the operation and administration of the Kentucky schools and their educational programs. The Kentucky General Assembly meets every two years with the last session held January through March of 1988. At each regular session, the General Assembly meets for a total of 60 days. Special sessions can be called by the Governor if he or she designates the specific and limited agenda at the time of the announcement.

The Kentucky General Assembly, consisting of the House and the Senate, operates similar to most other states. Functionally, proposed legislation must have the cooperation from the Governor's Office and a majority of the members of the General Assembly. The Kentucky Governor has his or her own Education Cabinet that guides the Governor's efforts in promoting educational policy, research and development, and the promotion of new educational concepts in the Governor's proposed programs.

Funding for Elementary and Secondary Education(8)

The Kentucky Minimum Foundation funding formula provides a base of funds for each school district in the Commonwealth. Each local government unit charges a local property tax of 30 cents per $100 of equalized assessed valuation of property. It is with this money and other funds allotted through the general fund of the state that the schools are appropriated funds through the Minimum Foundation formula.

Such factors as average daily attendance, administrative and special instructional units, weighting for handicapped children and vocational programs, current operational expenses, transportation projections, and capital outlay are built into the funding process.

Another component of the funding process is the power equalization concept, a grant to each school district. The program provides a guaranteed-tax yield formula assuring local school districts financial resources for each student in average daily attendance to the degree support is provided by legislative appropriations.

This process in theory provides for equity in funding for each child but in practice does not meet this objective. The highly varying tax rates on properties and the unequal distribution of wealth in the Commonwealth provides a very unequal funding for the varied school districts across the Commonwealth.

This variation or inequity is most explicitly shown in Table 16, which categorizes the top 10 and bottom 10 Kentucky school districts in three funding factors: assessed valuation per pupil, equivalent tax rates per $100 of assessed valuation, and local revenue per pupil.

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Table 16

Rankings of the Top 10 and Bottom 10 Kentucky Schools in Assessed Valuation, Tax Rates, and Local Revenue Per Pupil 1989(8)

THE TOP (AND BOTTOM) 10

ASSESSED VALUATION PER PUPIL (A measure of a district's wealth)

TOP 10		BOTTOM 10	
1. Butler	$323,034	1. McCreary	$35,932
2. Anchorage	280,195	2. East Bernstadt	37,411
3. Fayette	270,694	3. Dayton	41,244
4. Woodford	241,156	4. Monticello	41,304
5. Beechwood	238,442	5. Jackson	42,238
6. Boone	221,130	6. Magoffin	44,378
7. Jefferson	220,518	7. Elliott	45,328
8. Bardstown	211,793	8. West Point	49,487
9. Ft Thomas	187,793	9. Jenkins	50,221
10. Southgate	183,288	10. Clay	51,894

EQUIVALENT TAX RATES PER $100 OF ASSESSED VALUATION

(This measure – total local tax collections for schools expressed as a property tax rate – indicates willingness to tax)

TOP 10		BOTTOM 10	
1. Walton Verona	$1.14	1. Metcalfe (tie)	$.241
2. Anchorage	1.03	2. Ohio (tie)	.241
3. Newport	.88	3. Adair	.246
4. Paris	.86	4. Hardin	.247
5. Dawson Springs	.83	5. Magoffin	.248
6. Jenkins	.82	6. Casey (tie)	.250
7. Covington (tie)	.79	7. Muhlenberg (tie)	.250
8. Jefferson (tie)	.79	8. East Bernstadt (tie)	.251
9. Silver Grove (tie)	.79	9. Marshall (tie)	.251
10. Hancock	.77	10. Rockcastle (tie)	.251

LOCAL REVENUE PER PUPIL (A measure of local effort for education)

TOP 10		BOTTOM 10	
1. Anchorage	$3,186	1. Elliott	$118
2. Fayette	1,863	2. Owsley	120
3. Jefferson	1,772	3. Magoffin (tie)	122
4. Beechwood	1,610	4. Jackson (tie)	122
5. Owensboro	1,376	5. East Bernstadt	128
6. Ft Thomas	1,240	6. McCreary	159
7. Pikeville	1,179	7. Clay	162
8. Hancock	1,151	8. Monticello	169
9. Bowling Green	1,146	9. Knox	171
10. Southgate	1,072	10. Wolfe	172

[illegible]

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This data is dramatically presented showing assessed property valuation per pupil of $323,034 in Butler County to $51,894 in Clay County school districts. Butler County does not fall in the top 10 school districts in local revenue per pupil with the high assess valuation per pupil, because the equivalent tax rate has been rolled back to such a lower level.

With such inequities and inconsistencies in these three measures of wealth, willingness to tax, and local effort, the groundwork was laid for the current landmark decision by the Kentucky Supreme Court of June 1989, which will be discussed in more detail later in this report.

The need for improved financial support for the local schools, including tax reform, was the number one need identified by the Appalachia Educational Laboratory Kentucky policy board members in the 1989 AEL needs assessment project.(1) The data collected from the Kentucky policymakers showed their perceptions of believing that the state is reasonably capable and ready to face reform and change if citizens believe that reform will bring real results with accountability measures. This view is also supported by the 1987 public opinion survey in Kentucky, a joint study by the Kentucky School Boards Association and the Appalachia Educational Laboratory.(9)

Role of Higher Education in Public Elementary and Secondary Education

Legislative and Policy Directives

As in any state, Kentucky's progress in education depends upon a healthy and supportive relationship between higher education and elementary and secondary education.

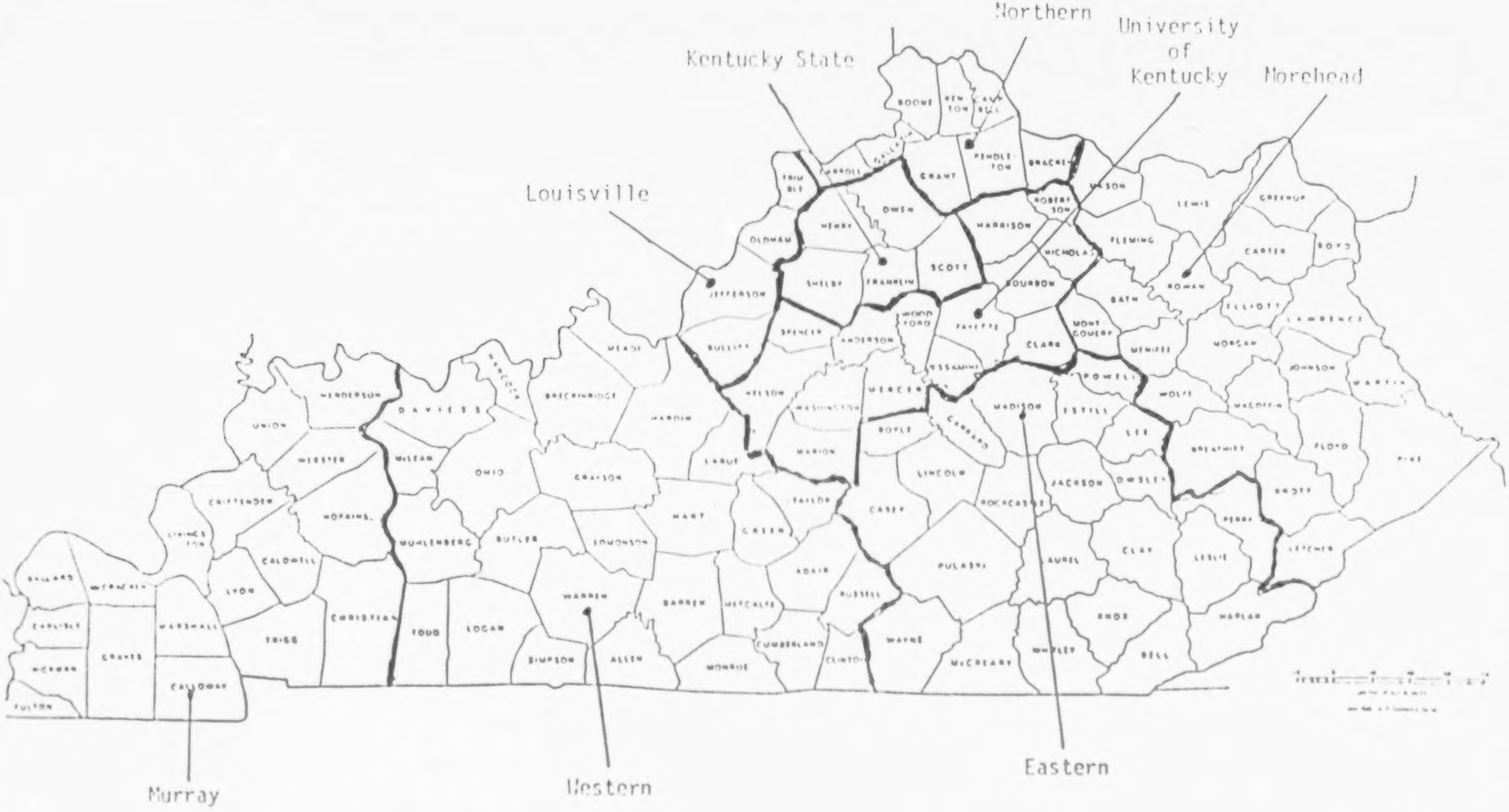
The Council on Higher Education and the Kentucky Department of Education have each other's chief executive officer serve as an ex officio member of their respective governing boards. This serves to enhance communication and coordination to a large degree.

Each institution of higher education that has a graduate level program tends to place varying degrees of emphasis on service to the elementary and secondary schools of the state. In at least four of the regional universities, including Eastern Kentucky, Morehead, Murray, and Western Kentucky, the institution's mission statement contains a commitment to service and support of elementary and secondary education. Specifically, the mission statements refer to providing applied research, service, and continuing education programs.(4)

The Council of Higher Education in Kentucky has, during the past decade, designated service regions specifically defined for the purpose of providing support to the elementary and secondary schools in the region without duplicating resources and programs. Figure 2 gives the regions and the designated universities assigned to each region.(4) Historically, the services to each region have been directed to coordinating continuing education and extended campus programs.

Figure 2

Service Regions of State Universities in Kentucky


Northern
University of Kentucky
Kentucky State
Morehead
Louisville
Murray
Western
Eastern

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The approved teacher education programs at the Kentucky colleges and universities provide the training programs for teacher and leadership certificates and endorsements. To fulfill this important function there is a continuing dialogue between the leadership of the Kentucky Department of Education, Division of Teacher Education Certification, and the Colleges and Departments of Education in participating institutions of higher education.

Currently, there is a funded federal program, Leadership in Educational Administration (LEAD), which has a network of cooperative programs and projects with institutions of higher education, regional educational consortia, the Department of Education, and the Kentucky Association of School Administrators. This program provides a series of leadership training programs, shares research, and provides a communication network. The Appalachia Educational Laboratory is an important partner in the Kentucky LEAD program.

The state has mandated internship programs for both beginning teachers and principals that are assisted by the participating universities in training and monitoring. University personnel serve on the interns committee with representatives of an interns teacher colleagues and the local school administration.

The role of teacher training in Kentucky provides many opportunities for cooperation and interaction.

Preservice Preparation Leading Towards Certification

The eight Kentucky public institutions of higher education and 16 independent senior institutions have state-approved teacher education programs. The fall 1988 data from "total headcount enrollment by degree field" showed 10,126 students in education preparation programs at the state-approved universities, of which 5,493 were in elementary education. The independent senior institutions had 3,185 students in education preparation programs, and 2,290 in elementary education. This shows a large basis of support through providing candidates for vacancies in the teaching and administrative ranks.(7)

The number of graduates from the teacher education programs was not readily available. Data from 1985 estimated that teacher education programs in Kentucky were graduating about 2,000 graduates per year.

Inservice Training and Consultation Services

Each of the universities and a number of the senior independent, nonpublic institutions with graduate programs provide opportunities for inservice training and offer consultation services to the elementary and secondary schools of their respective service regions. The Council of Higher Education has budgeted appropriations annually to each state institution to assist in the support services provided the elementary and secondary schools. This appropriation has been minimal and is generally used as "seed" money for new programs.

Several of the universities have professional development centers that coordinate the delivery of services, including inservice education and consultation. This taps the wide range of resources potentially available at each university, which includes research and development, grant writing assistance, planning and needs assessment, and many other areas of expertise needs at the local level.

Higher education data were not readily available for giving a detailed profile of teacher education programs, progress, and needs.

Trends in Public Elementary and Secondary Education

Current Reaction to Kentucky Supreme Court's Decision on School Equity, a Landmark Decision

On June 8, 1989, the Kentucky Supreme Court released a lengthy opinion demanding that the Kentucky General Assembly provide an equitable school system, paying to educate the children of the Commonwealth whether they live in poor or wealthy districts.

The historic decision will require millions of dollars additionally for education and its support services. It will also overturn decades of legislation that have formed the basis for the state's educational system.

The Court's decision, as it is known, was a lower court response to a lawsuit brought by 66 of the state's poorer school districts. The basic premise held the Kentucky's system of schools is inefficient and inequitable, an analysis now supported by the high court of the Commonwealth.

The General Assembly has the responsibility for seeing that the system of schools is constitutional, the court said. Should the legislature delegate such responsibility to local boards of education, it must make sure the "ultimate control lies with the General Assembly."

Former Governor Bert T. Combs, a lawyer representing the school districts that brought the original suit against state officials, said the high court goes beyond anything proponents of the original decision ever dreamed possible.

The Supreme Court of Kentucky leaves the question of how to achieve an efficient system to the General Assembly. But, the legislature must make sure that certain criteria are met, the court said. The justices ruled that the state's schools must:

1. Be established, maintained, and funded by the General Assembly.
2. Be free to all who attend and open to all Kentucky children.
3. Be substantially uniform throughout the state.
4. Provide equal opportunities regardless of where children live.
5. Be operated with "no waste, duplication, no mismanagement, and with no political influence."
6. Be funded so that each child receives an adequate education.

The court defined what it considers an adequate education. Students must receive instruction leading to sufficient communication skills; knowledge of economic, social, and political systems; understanding of government processes; training in the arts and physical wellness; progress in advanced training in academic or vocational fields; and sufficient skills to compete with students in other states.

A Council on School Performance Standards was created by an executive order of the Governor to answer two questions essential to the school restructuring program that was stimulated by the Kentucky Supreme Court decision and the Governor's interest and commitment to school reform. These are:

1. What should students know and be able to do by the time they complete elementary, middle, high, and vocational schools?
2. How should student knowledge and performance be assessed?

The Council, composed of business, government, and educational leaders, is currently conducting a research and development program to produce a knowledge base for further defining the Supreme Court's directive of what children should know upon completion of the educational process.

The Council will further define these capacities by specifying what students should know and be able to do by grades three, five, eight, and twelve.

Kentucky Governor's Educational Reform Movement

Educational reform has been a leading agenda item for the Governor. With a pledge for no new taxes, Governor Wallace G. Wilkinson has held to a strong position that, with a restructuring of the Kentucky educational process and a reallocation of current budget appropriations, Kentucky education could be greatly improved with little additional dollars and certainly no increase in taxes.

This position has been held with tenacity and has created a strong conflict with key leaders of the General Assembly that had passed and partially funded a rather broad reform program under the leadership of Governor Martha Lane Collins in the legislative sessions of 1984 and 1988. Governor Collins' program philosophy was that Kentucky education could be improved significantly by refining the current educational processes and funding more realistically the current programs. The Kentucky legislature has been reluctant to drop Collins' reforms and to start anew with the current administration, a typical Kentucky phenomenon with the constitutional restriction of one consecutive term of a Governor. The support for the Collins' program along with the Governor's stance against new taxes has negated any positive and productive action in support of education during the past two years.

The current Kentucky Supreme Court decision seems to have moved both the legislative leaders and the Governor into a collaboration mode and a willingness of both parties to negotiate their former positions.

Current Educational Planning at the State Level

As the state moves into the early fall, the legislature is coordinating a task group consisting of 30 members of representatives of the

House and Senate, the Governor's Office, and other representatives. The Task Force on Educational Reform has been subdivided into three committees: Curriculum, Finance, and Governance. They are presently gathering information and holding hearings for various educational groups. Much time has been lost in the fighting over the composition of the committee. There are no educators on the committee to this point.

With the regular session of the General Assembly scheduled for January of 1990, the legislative task group is now looking at many new options for dramatically changing the elementary and secondary program. Since the Supreme Court decision has declared the Kentucky educational system, as a whole, unconstitutional, this allows the state to totally evaluate every component for more effective alternatives.

The legislative task group has invited many experts on education from around the nation to share their perspectives on what constitutes an effective educational system and how Kentucky can use this golden opportunity to develop a model program for the nation.

Current speculation holds that this task group will continue with the input and its planning and then, after the 60-day regular session in January to March, the Governor will call a special session to enact new educational measures and the necessary funding.

In the current tentative state of affairs, Kentucky's future education programs are based upon pure speculation. Every facet of the process is open for evaluation and modification or complete change. Accountability and restructuring to bring the decisionmaking process down in the organizational process are appearing to be key concepts guiding the discussions. If this is the case, and it guides the current planning

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In the current tentative state of affairs, Kentucky's future education programs are based upon pure speculation. Every facet of the process is open for evaluation and modification or complete change. Accountability and restructuring to bring the decisionmaking process down in the organizational process are appearing to be key concepts guiding the discussions. If this is the case, and it guides the current planning efforts, and if the legislative task group functions effectively, there are possibilities that the results can be enlightening. However, if the process is "muddled" as is so often the case in Kentucky's political "quagmire," the scenario and its implementation could be a nightmare.

The Appalachia Educational Laboratory 1989 Needs Assessment Project data collected from the Kentucky policymakers seemed to correlate strongly with reform needs identified by the Supreme Court decision and other activity surrounding this movement. In addition to the need for financial support and financial reform, the policymakers placed high priority on improving the functioning of local boards of education and the improvement of both the recruitment and professional development of teachers and administrators. The policymakers expressed a great need to ensure that Kentucky educational policy is informed by the outcomes of educational research and development. They spoke strongly for the reform movement in the Commonwealth to be based upon the tremendous amount of research knowledge about organizing schools for optimum learning and using the research for improving instructional planning and implementation of effective teaching and learning strategies.(1)

Current Trends in Kentucky Education

There are clearly established trends in the movement of Kentucky education that are in varying degrees of intensity. The following trends seem to be currently active and a have a high probability of continuing beyond the restructuring activity associated with the Kentucky Supreme Court decision.

1. The movement towards school-based management.
2. Emphasis on education on AIDS and family life curriculum.
3. Expanding the utilization of technology in management and instructional monitoring at the state and local school district levels.
4. Improvement of the selection and deployment of school personnel, which removes the selection process from the political arena to a more criteria-based selection process.
5. Willingness for the state to find new sources of revenue for education due to the pressures of equality of educational opportunity for all students, increasing costs of programs of asbestos abatement, workmen's compensation, salary improvements, and others.
6. Leadership to develop congruence between the written curriculum, the taught curriculum, and the tested curriculum.
7. Increase in the mainstreaming of mildly handicapped students into the regular classroom.
8. Increased accountability of local school districts to improve student achievement, attendance, holding power of students, and improve the ratio of expenditures on instruction to other components of the school operation.
9. The improvement of the teacher and leadership preparation programs in the colleges and universities.
10. Movement towards more collaboration between the statewide educational organizations, such as the Kentucky Education Association, the Kentucky Association for School Administrators, and the Kentucky School Boards Association, to impact education on issues of common need. Included in this pattern is the posture of the Kentucky Education Association's lower priority on collective bargaining.
11. Emphasis on management and leadership development with local school leaders as central to the school improvement program.
12. Greater involvement of the Kentucky Department of Education in the management of local school districts that have identified deficiencies.

R & D Resources Available to Support Elementary and Secondary Education

After a brief search for available research and development resources in the Commonwealth, it appears that they are extremely limited in both systems and funding.

The state universities have very limited funding for research and development, with the majority of the activities centered around special grants provided by the federal sources and some private funding from foundations and corporations. Most institutions have a few competent staff who will work with the elementary and secondary schools on special research programs. This, for the most part, is done on a consultative basis rather than provided as a free service of the university.

The Kentucky Department of Education has a division under the Office of Research and Planning that will assist all educational agencies with the statistical support for pursuing all kinds of research and development projects. The staff responds with a considerable database that can be accessed most effectively.

Limited sharing of research and professional articles useful to the elementary and secondary schools is provided by the professional educational associations, such as the Kentucky Education Association, the Kentucky Association of School Administrators, and the Kentucky School Boards Association. These organizations have a limited library of current resources, but are willing to assist within these limits.

The Appalachia Educational Laboratory has a comprehensive network of resources that are readily available to all educational organizations and agencies in Kentucky. This appears to be the most complete and accessible source. AEL has responded to requests for assistance in developmental efforts with special study groups--sharing staff and other resources as within their mission. Their network with other Laboratories in the United States is a most valuable resource for planning, research, and study.

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Appendix H
TN State Report

TENNESSEE EDUCATION STATUS REPORT

September, 1989

APPALACHIA EDUCATIONAL LABORATORY

Dennie L. Smith, Professor
MEMPHIS STATE UNIVERSITY

Tennessee Education Status Report
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Tennessee Public and Private Higher Education

TENNESSEE STATE STATUS REPORT

I. General Demography

The state of Tennessee exemplifies a range of attributes covering a wide spectrum of diversity in population, economy, society and commerce. From the Great Smokey Mountains of the Appalachian Range in the east to the wide plateau overlooking the Mississippi River Valley in the west, topography attests to the scope of social and economic features of this state.

The 1990 Census for the United States is in view and special preparations are being made to ensure its thoroughness and complete authenticity. Particular attention to the current demographics of Tennessee will contribute vitally to the preparation of statistics for this state in 1990.

Population

The population of Tennessee is 4,803,000 according to the Bureau of the Census reflecting a 4.6 percent change from 1980-1986. Encompassing 41,155 square miles of land, the state is inhabited by 116.7 persons to the square mile. In 1984, of these persons 21.7 percent were between the ages of 5-14 years, 57.1 percent were 15-64 years, and 21.2 percent were age 65 and above. Thus, more than half, 57.1 percent, were of the age to be part of the working force and 31.6 percent were of the traditional age to be school and college students.

In 1985 the state included 1,757,000 households with a mean of 2.65 persons in each. Of these households 11.3 percent were headed by a female and 20.4 percent were one-person households indicating that 683 percent were more than likely traditional two-parent families. The ratio of births to deaths in 1984 was 65,006 to 42,334 indicating a potential and substantial growth in population with this continuing trend. Marriages in 1984 totaled 55,203 compared to 29,638 divorces revealing a 53 percent chance that marriage will end in divorce (County and City Data Book).

The Tennessee Higher Education Commission predicts optimistic development for the state in their report *The Future of Tennessee.*

> Tennessee will move into the 1990's with modest population growth from 4.9 million residents in 1986 to 5.2 million residents by 1993. Reflecting national and regional trends, a higher percentage of the population will be black, elderly, and urban. Forecasters predict an era of moderately strong economic growth with state production increasing in real terms approximately three percent each year, employment growing by 1.4 percent annually, and unemployment declining slowly. Technological advances, especially these involving computers and telecommunications, will provide improved productivity and new possibilities for closer partnerships between private enterprise and government. Finally, fundamental structural changes in the economy of the past decade, such as the shift to service activities and international business, should culminate by the mid-1990's, thus creating a more stable, energized economy. These favorable developments will permit Tennessee to outpace the nation in overall economic growth during this period.

Population Centers and Rural Areas

Tennessee continues to be primarily a rural economy with 12,475,000 acres utilized by 90, 565 farms of which 40.2 percent are less than fifty acres. Fifty-five percent of these farms are between fifty and five-hundred acres, and only 4.8 percent are over five-hundred acres indicating that the state is composed of small farms on which 40.6 percent of occupants live on the income produced from that farm.

The four major urban centers have experienced healthy growth in recent years. In 1986, the Memphis-Shelby County area attained a population of 809,000 inhabitants compared to 777,113 in 1980. The capital city area of Nashville-Davidson County contained a population of 497,900 inhabitants over a 1980 population of 477,811. Knoxville in Knox County had 329,500 inhabitants compared to a 1980 population of 319,694. The remaining center is Hamilton County-Chattanooga which is the only center that has not realized population growth since 1980. Its 1986 population was 284,300 compared to a 1980 population of 287,740. These figures and those for population per square mile, plus racial and gender characteristics, are presented in Table 1

Table 1. **Urban Centers' Population and Statistics for 1986**

	Population **1980 1986**	**Persons / sq mile**	**Race** **White Black**	**Gender** **Male Female**
Davidson/Nash	477,811/497,900	993.8	76.51/23.49	90.6/100
Hamilton/Chatt	287,740/284,300	527.5	79.28/20.72	92.9/100
Knox/Knoxville	319,694/329,500	651.2	90.29/9.71	92.9/100
Shelby/Memphis	777,113/809,600	1,048.7	55.60/44.40	91.3/100

In comparison with the United States, Tennessee growth in persons per square mile was behind the national average in percentage change from 1980 to 1986. The United States experienced a 6.4 percent increase in persons per square mile compared to Tennessee's 4.6 percent growth. Tennessee's growth change, however, was favorably consistent with her sister states of Mississippi with a growth change of 4.1 percent and Arkansas with an increase of 3.9 percent.

Indicators of Wealth and Poverty

Per capita income in 1985 was $9,290 indicating a 49.5 percent change during the time period of 1979-1985. During the period of 1986-1987, the per capita income increased from $11,984 to $12,880, a 7.5 percent increase which compares to the United States rate of increase of 6.0 percent on $14,606 to $15,481 for the years of 1986-1987. Tennessee also compares favorably to Mississippi which experienced a 6.5 percent increase in per capita income from $9,663 to $10,292 and Arkansas which gained an increase of only 4.4 in per capita income from $11,025 to $11,507 (State Education Indicators).

Tennessee's labor force in 1986 was composed of 2,301,000 workers which reflected a 1.9 percent increase from 1985 to 1986. Unemployment in 1986 held steady at 185,000 which is an 8.0 percent rate.

II. Educational Demography

Responsibility for governance in the state of Tennessee is facilitated through the Tennessee State Department of Education (TSDE) and the Tennessee Higher Education Commission (THEC). The TSDE has responsibility for K-12 levels of education while the THEC oversees the functions of post-secondary or higher education.

Public Elementary/Secondary Schools

Public school enrollment in Tennessee for 1986-87 was 855,157 compared to 880,774 in 1980. In the Fall 1987, public school enrollment in Tennessee was 823,783 compared to 505,550 for Mississippi and 437,036 in Arkansas. In Tennessee there are 141 school districts with 15 districts, or 10.6 percent, which have under 1000 students. This number of districts compares with 152 in Mississippi which has 10 districts, or 6.6%, which have under 1000 students. The state of Arkansas possesses 331 districts of which 223 (67.4%) are under 1000 students reflecting the wide rural nature of the state (State Education Indicators).

The number of public schools, kindergarten through grade twelve, and the net enrollment of all twelve grades, kindergarten, and special education are specified on the accompanying table.

==

Table 2. **Number of Public Schools (Kindergarten - Grade Twelve)**

Schools	Totals
Grades K-3	35
Grades K-6	334
Grades K-8	254
Grades K-12	37
Grades K-Other	288
Elementary Grades without K	24
Middle Schools	120
Grades 7-9	62
Grades 7-12	46
Grades 9-12	156
Grades 10-12	46
Alternative Schools	38
Comprehensive Vocational Centers	48
Special Education	35
Other	127
Total	1,650

Table 3. **Net Enrollment (Kindergarten through twelve)**

Kindergarten	66,060	Eighth Grade	65,007
First Grade	71,414	Ninth Grade	71,400
Second Grade	65,881	Tenth Grade	68,337
Third Grade	63,689	Eleventh Grade	59,933
Fourth Grade	63,512	Twelfth Grade	51,770
Fifth Grade	60,695	Special Education	
Sixth Grade	61,679	Self-Contained	19,588
Seventh Grade	66,192	**Total Net Enrollment 855,157**	

The decline of the school age population due to maturation of the "baby boom" generation is reflected in regional and national statistics. In Tennessee the decrease from 1,000,000 school age children in 1977 to 923,000 in 1987 was a 7.7 percent decrease. This decline has apparently tempered somewhat since 1982 when a figure of 939,000 reflects a lesser, 1.7 percent, change. For the United States, the percent of change from 1977 to 1987 was 9.2 percent decrease determined by numbers of 49,897,000 for 1977 and 45,290,000 for 1987, also reflecting a tempering since 1982 when the school age population was 45,656,000 producing a change from 1982 to 1987 of only 0.8 percent (State Education Indicators).

The percent of school age children in the total United States population changed from 23.1 percent in 1977 to 18.6 percent in 1987 which is a -4.5 percent change. Tennessee's percent of school age children in the total state population was 23.3 percent in 1977 and 19.0 percent in 1987 which shows a comparable change rate of -4.3 with the United States' percent of school age children(State Education Indicators).

An Appalachia Educational Laboratory (AEL) Demographic Study disclosed enrollment in the major Tennessee city-county areas in 1984-85. Memphis City Schools led with an enrollment of 112,915 and Shelby Country with 30,350 together with Memphis had an enrollment of 143,265. Davidson county schools had an enrollment of 65,978.

Knox County and Knoxville City together had an enrollment of 55,030. Hamilton County and Chattanooga City followed with an enrollment of 46,060.

In 1986-1987 assessment revealed the numbers for students per square mile in the cities of Memphis and Chattanooga were 367.86 and 185.36 respectively. The figures for the most populous counties showed Shelby County had 37.10, Davidson County had 117.33, Knox County had 49.41 and Hamilton County had 34.43 students per square mile (AEL Demographic Study).

The record of pupil progress in public schools in Tennessee indicates that of a total enrollment of 878,521 in K-12, a figure of 737,136 or 84 percent were promoted in 1987 with a failure rate of only 52,768 or six percent. Complete figures on pupil progress in Tennessee are provided in the following table.

Table 4. **Record of Pupil Progress in Tennessee Public Schools**

	Total	Dropped	Re-entry	Promoted	Failed	Suspended	Expelled
Kindergarten	69,841	9,486	2,187	59,971	2,571	55	0
First Grade	76,436	10,497	1,872	60,763	7,048	210	1
Second Grade	69,984	8,305	1,617	59,959	3,337	252	1
Third Grade	67,631	7,740	1,427	58,554	2,764	349	1
Fourth Grade	67,410	7,549	1,444	59,209	2,096	585	2
Fifth Grade	64,322	7,152	1,320	56,519	1,971	983	4
Sixth Grade	65,434	6,942	1,319	57,715	2,096	2,016	7
Seventh Grade	70,027	8,515	1,808	57,183	6,137	6,895	29
Eighth Grade	68,435	8,442	1,906	57,316	4,583	7,281	31
Ninth Grade	74,690	11,455	2,122	57,992	7,375	10,887	86
Tenth Grade	70,544	10,129	1,804	56,175	6,044	7,810	62
Eleventh Grade	61,415	8,128	1,226	50,508	4,005	5,438	30
Twelfth Grade	52,352	5,037	698	45,272	2,741	3,361	15
Total	**878,521**	**109,367**	**20,750**	**737,136**	**52,768**	**46,122**	**269**

Pupil teacher ratio in 1982 was 20.5 children per teacher. This ratio improved in 1988 to 19.6 children per teacher giving Tennessee a ranking of 44 in the nation as a whole. The ratio for the United States was 17.6 children per teacher for 1988. Tennessee's sister states of Arkansas and Mississippi ranked 24 for Arkansas with 17.1 children per teacher and 41 for Mississippi which had 18.8 children per teacher (Education Daily, May, 89).

In average teacher salary, Tennessee ranked 39 in the nation with a figure of $23,705 in 1988. This showed an improvement over 1973-1974 when average teacher salary was $9,916 and 1985-1986 when salary was $21,800. In 1988 Tennessee did rank favorably with Mississippi whose average teacher salary was $20,562 (49) and Arkansas whose average teacher salary was $20,340 (50) (Education Daily, May 89).

Assessment of student performance for 1987-1988 revealed that Tennessee ranked 22 in the nation in student ACT scores with 18.0. The range of scores nationally was not wide, however, as the highest rank belonged to Iowa with a score of 20.3. Arkansas was 25 with a score of 17.9 and Mississippi was 28 with a score of 16.2. The national average for the ACT was 18.8 which showed a 0.1 percent increase from the 1987 score of 18.7. For Tennessee mean SAT scores rose on verbal from 477 in 1975 to 489 in 1985. Mathematics SAT scores rose from 511 in 1975 to 521 in 1985.

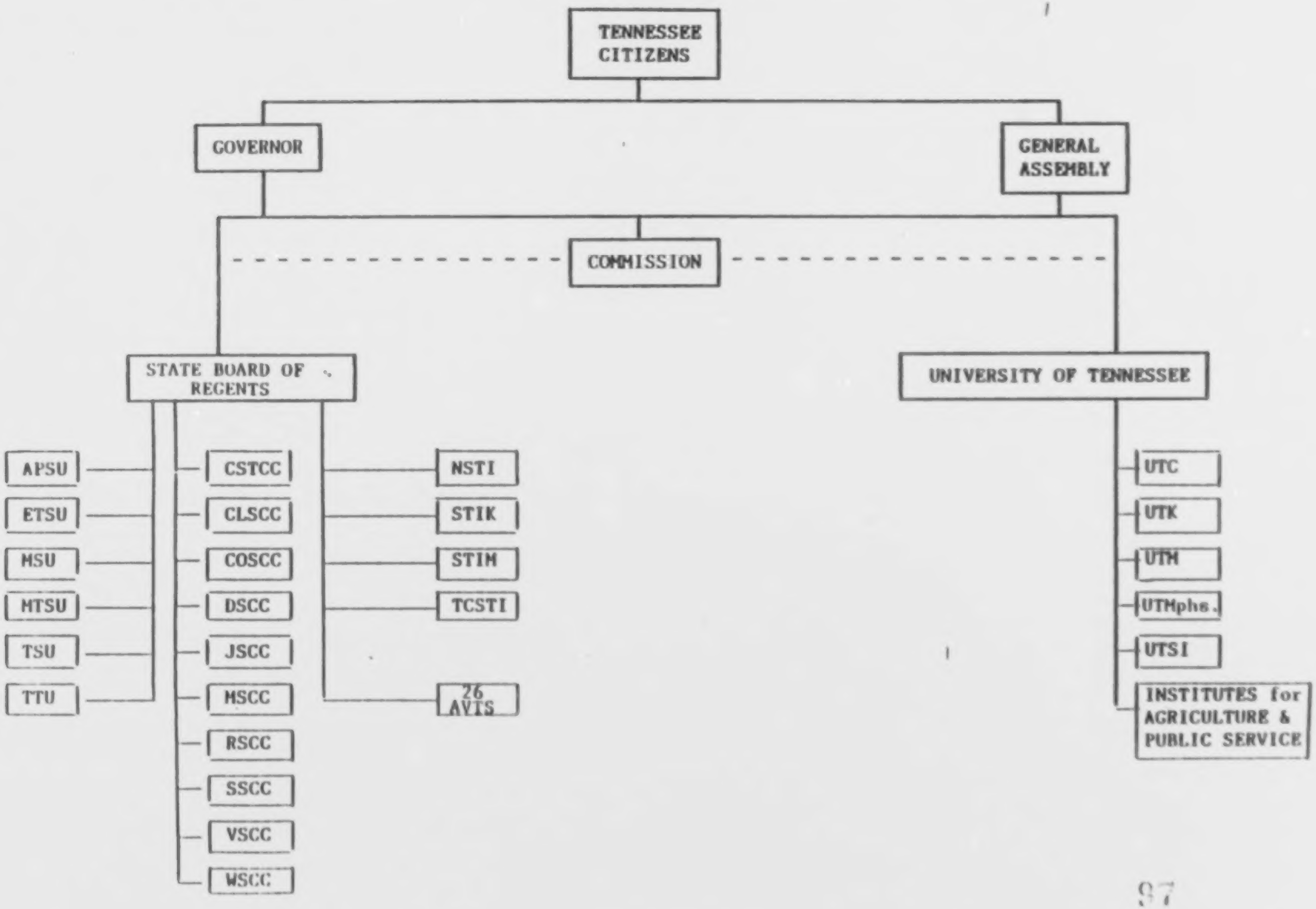
Examination of graduation rates for 1987 indicated Tennessee ranked 37 with 67.8 percent of students graduating from high school which is very close to the national graduation rate of 71.1. Mississippi and Arkansas had rates of 64.8 and 77.5 respectively (Education Daily, May, 89).

Public Higher Education Institutions

Higher education in Tennessee is organized and administered under two major systems; the University of Tennessee (U.T.) system, which has four major campuses, and the State Board of Regents (SBR) system which includes not only six public universities, but also ten community colleges and four technical institutes with 26 area vocational-technical schools. These institutions of higher education are governed by the Tennessee Higher Education Commission under the auspices of the Governor and the General Assembly as shown in Figure 1. The three accompanying maps (Figures 2,3,4) show the locations of the institutions within the state.

Figure 1

TENNESSEE PUBLIC HIGHER EDUCATION
GOVERNANCE/COORDINATION STRUCTURE


TENNESSEE CITIZENS
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STIK
STIM
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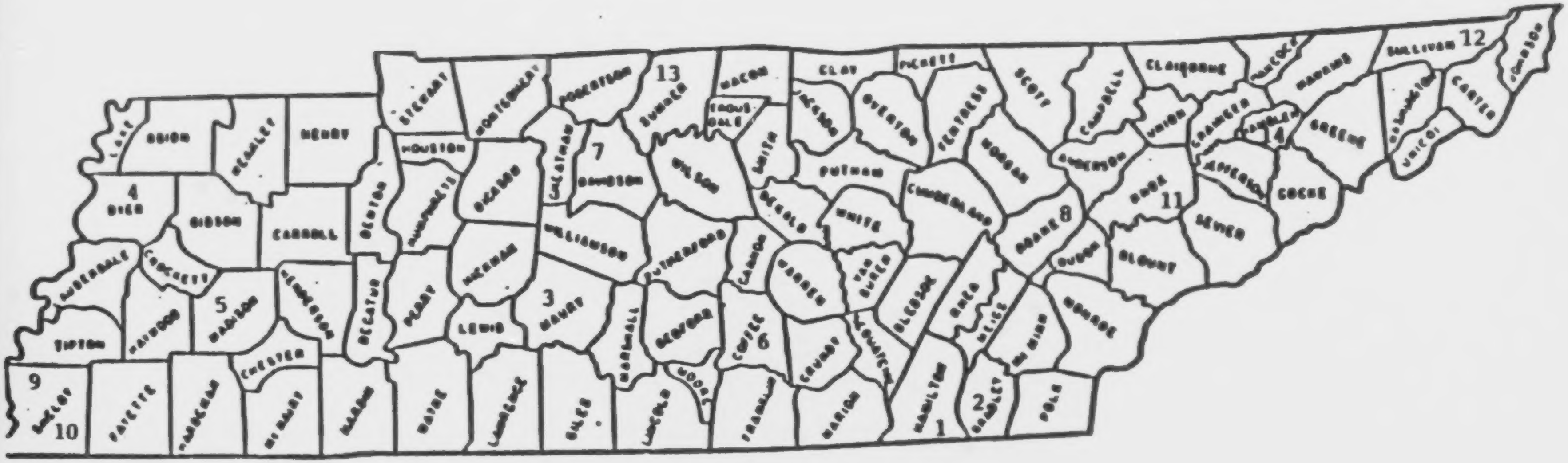
INSTITUTES for AGRICULTURE & PUBLIC SERVICE

Figure 2
Community Colleges and Technical Institutes



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HAWKINS
SULLIVAN
JOHNSON
DYER
GIBSON
CARROLL
BENTON
HOUSTON
HUMPHREYS
DICKSON
CHEATHAM
DAVIDSON
WILSON
TROUSDALE
SMITH
JACKSON
OVERTON
FENTRESS
MORGAN
ANDERSON
UNION
GRAINGER
HAMBLEN
GREENE
WASHINGTON
CARTER
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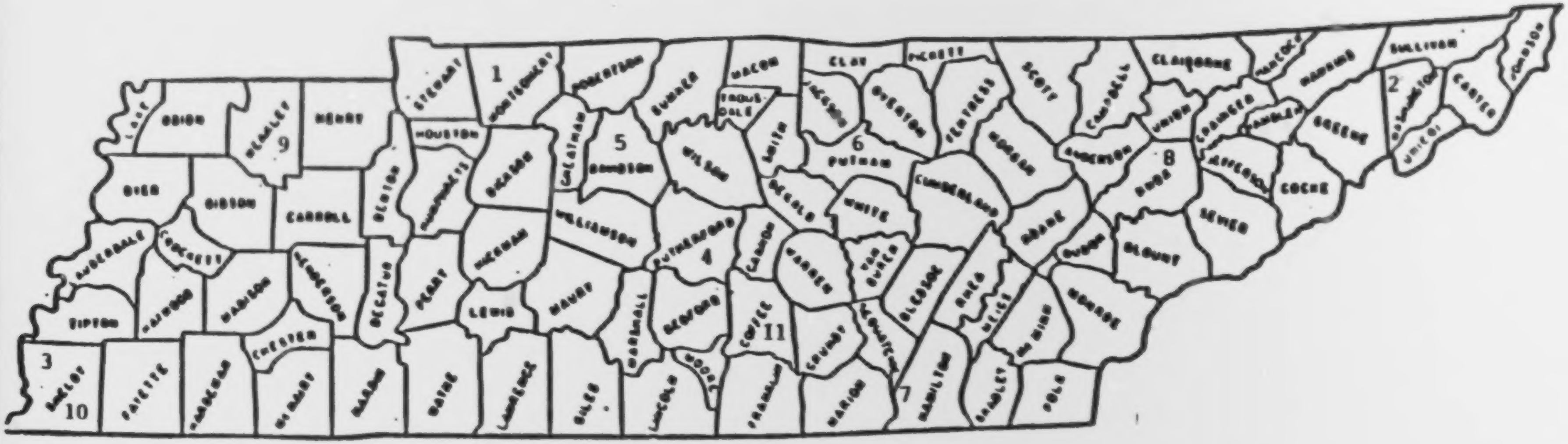
WHITE
CUMBERLAND
ROANE
KNOX
JEFFERSON
COCKE
SEVIER
BLOUNT
LOUDON
CANNON
WARREN
VAN BUREN
BLEDSOE
RHEA
MEIGS
MCMINN
MONROE
LEWIS
MAURY
MARSHALL
BEDFORD
COFFEE
GRUNDY
SEQUATCHIE
SHELBY
FAYETTE
HARDEMAN
CHESTER
MCNAIRY
HARDIN
WAYNE
LAWRENCE
GILES
LINCOLN
MOORE
FRANKLIN
MARION
HAMILTON
BRADLEY
POLK

1. Chattanooga State Technical Community College
2. Cleveland State Community College
3. Columbia State Community College
4. Dyersburg State Community College
5. Jackson State Community College
6. Motlow State Community College
7. Nashville State Technical Institute
8. Roane State Community College
9. Shelby State Community College
10. State Technical Institute at Memphis
11. State Technical Institute at Knoxville
12. Tri-Cities State Technical Institute
13. Volunteer State Community College
14. Walters State Community College

Figure 3

Public Universities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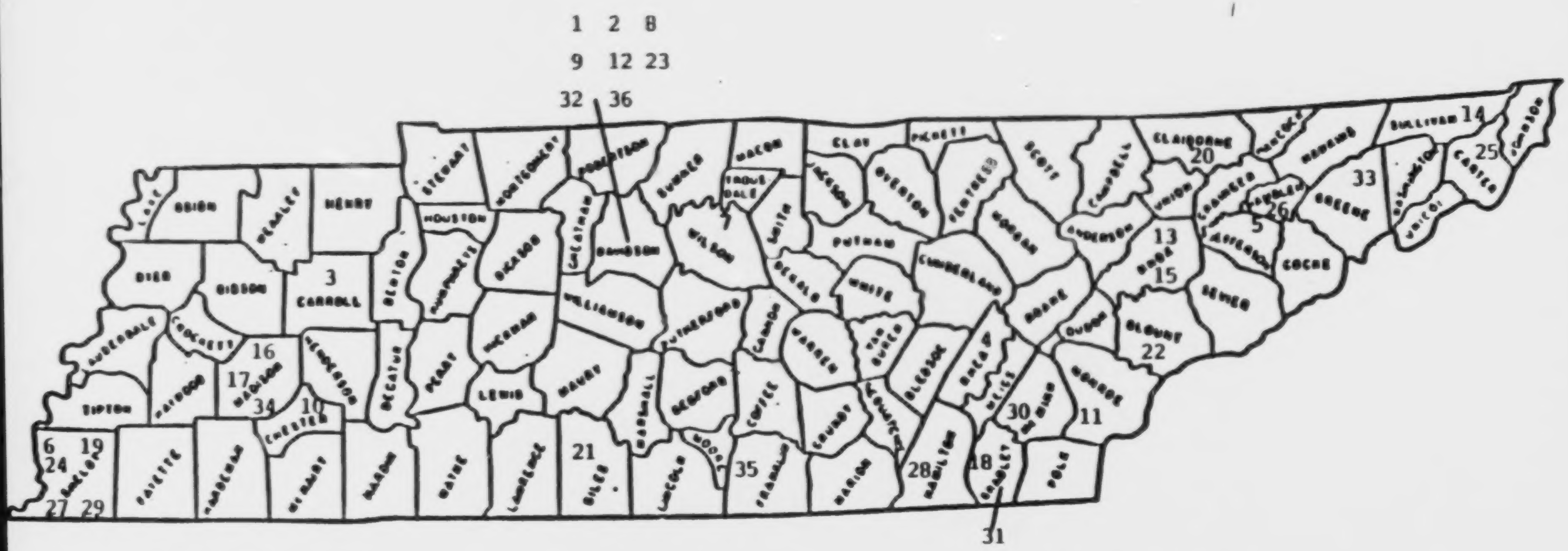
MARION
HAMILTON
BRADLEY
POLK

1. Austin Peay State University
2. East Tennessee State University
3. Memphis State University
4. Middle Tennessee State University
5. Tennessee State University
6. Tennessee Technological University
7. University of Tennessee at Chattanooga
8. University of Tennessee at Knoxville
9. University of Tennessee at Martin
10. University of Tennessee at Memphis
11. University of Tennessee Space Institute

Figure 4

Private Higher Education Institutions*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WILLIAMSON
KNOX
SULLIVAN
CARTER
HAMILTON
BRADLEY
MADISON
CARROLL

1. Aquinas Junior College
2. Belmont College
3. Bethel College
4. Bryan College
5. Carson-Newman College
6. Christian Brothers College
7. Cumberland College
8. David Lipscomb College
9. Fisk University
10. Freed-Hardeman College
11. Hiwassee College
12. John A. Gupton College
13. Johnson Bible College
14. King College
15. Knoxville College
16. Lambuth College
17. Lane College
18. Lee College
19. Lemoyne-Owen College
20. Lincoln Memorial University
21. Martin College
22. Maryville College
23. Meharry Medical College
24. Memphis College of Art
25. Milligan College
26. Morristown College
27. Rhodes College
28. Southern College
29. Southern College of Optometry
30. Tennessee Wesleyan College
31. Tomlinson College
32. Trevecca Nazarene College
33. Tusculum College
34. Union University
35. University of the South
36. Vanderbilt University

*Members of the Tennessee Council of Private Colleges

The headcount enrollment for total Tennessee public and private higher education institutions for Fall, 1987 are depicted in the graph in figure 5. A break-down of these enrollments follow:

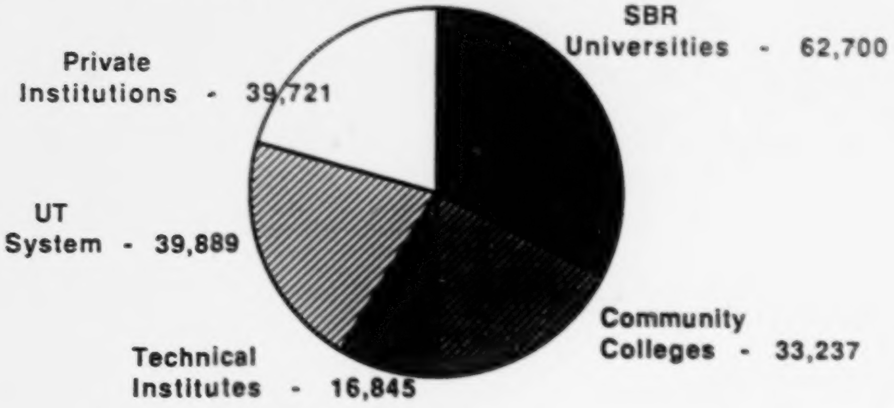
Table 5. **Headcount Enrollment in Tennessee Institutions, Fall 1987**

Public Institutions:			
SBR Universities	62,700		
SBR Community Colleges	33,237		
SBR Technical Institutes	16,845		
University of TN System	39,889		
Total enrollment/public institutions		152,671	
Private Institutions		39,721	
Grand total/higher education institutions			**192,392**

Figure 5

Headcount Enrollment

Tennessee Institutions - Fall 1987



A comparison of public headcount and Fulltime Teaching Equivalent (FTE) enrollment with that of the private higher education institutions illustrates a wide discrepancy in public and private headcount enrollments. The following graph displays the difference in headcount and FTE enrollment in both public and private institutions in Tennessee.

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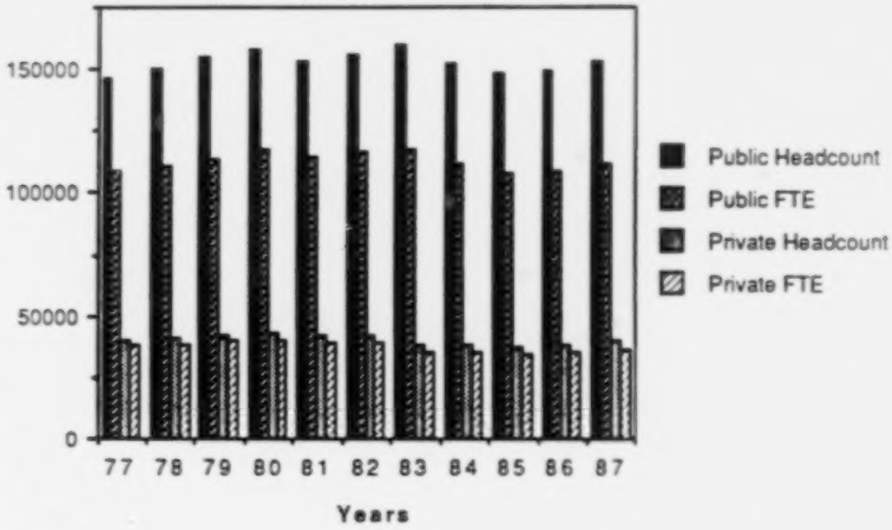
Figure 6.

Headcount vs FTE Enrollment 1977-87
Tennessee Public & Private Higher Education



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Enrollment in Tennessee's public higher education institutions in 1987 was composed of 138,654 (90.8%) instate students and 11,443 (7.5 %) out of state students with 2,574 foreign students comprising 1.7 percent of the student body. Full-time students accounted for 58.5 percent of the enrollment with 89,310 students. This means 63,361 part-time students make up 41.5 percent of the enrollment. Racial demographic figures show 128,173 (84%) are white, 20,340 (13.3) are black, 3,724 (2.4%) are American Indian, Hispanic,etc. and 434 (0.3%) are unclassified. The ratio of male to female is 70,248 (46.0%) and

82,423 (54.0%) respectively (Statistical Abstract of TN).

Racial breakdown of the public institutions shows that SBR Universities had 80.4 percent white, 16.4 percent black, and 2.6 percent other with 0.6 percent not reported. The UT System had 89.6 percent white, 6.9 percent black and 3.6 percent other. The Community Colleges had 86.8 percent white, 12.2 percent black, and .9 percent other. The Technical Institutes had 78.4 percent white, 19.6 percent black, and 2.0 percent other. The grand total for the state of Tennessee showed 128,053(84.2%) white, 20,340 (13.3%) black, and 3,724 (2.58%) other.

From 1983 to 1987 freshman enrollment and percentage change reflected a declining enrollment for the years 1983 through 1986 with a definite reversal and increase for 1987. This same trend has been visible in the total undergraduate enrollment for these same years.

Table 6. **Variation in Freshman/Undergraduate Enrollment 1983 - 1987**

1983	*1984*	*% change*	*1985*	*% change*	*1986*	*% change*	*1987*	*%chang*
Freshman enrollment								
27,494	26,319	-4.3	22,256	-15.4	21,280	-4.4	22,880	7.5
Undergraduate enrollment								
139,136	133,372	-4.1	129,128	-3.2	130,114	-3.2	133,514	2.6

(Statistical Abstract of TN)

According to the Tennessee Higher Education Commission in its report *The Future of Tennessee: Higher Education 1987-1993*, through the Comprehensive Education Reform Act state appropriations grew from $385.5 million in 1982-1983 to $628.7 million for 1986-1987. During this period, higher education enrollments remained stable. In 1986 the Legislature funded the formula for financing the basic needs of colleges and universities at 100%. In 1987 the formula was fully funded for instruction and research. General Fund appropriations for higher education increased from 20.9 percent in 1982-1983 to 21.3 percent in 1986-1987.

Nonpublic Elementary/Secondary Schools

Tennessee's private school enrollment was 71,671 out of a total school enrollment of 921,097 revealing that 7.8 percent of the state school enrollment was in private schools. Nationally, the private school enrollment was 4,961,755 out of a total enrollment of 44,794,237 or an 11.1 percentage of the total enrollment. Arkansas private school enrollment was 4.3 percent of 428,588 which is 18,423. Mississippi had a larger percentage of its total enrollment in private school. This state had 50,116 (10.1%) children in private school out of a total enrollment of 497,668. In comparison with these two states, the private school enrollment of Tennessee fell between that of Arkansas and Mississippi (State Education Indicators).

Nonpublic Higher Education Institutions

Total enrollment in Tennessee private higher education institutions for 1987 was 39,721. Of this figure, 19,674 (49.5%) students were instate, 18,753 (47.2%) were from out of state, and 1,294 (3.3%) were foreign students. Full-time students comprised 83.6 percent of the enrollment and part-time students were 16.4 percent. A racial breakdown of the private school enrollment indicated that 81.9 percent were white, 12.0 percent were black, 2.0 percent were American Indian, Hispanic or other nationality, and 3.3 percent were foreign students. The ratio of male to female was 46.2 percent to 53.8 percent respectively.

Freshman enrollment in private school areas has shown a steady decline in the last five or six years. A recent increase since 1986, however, may signal the end of the decline and predict a trend which could continue into the 1990's.

Table 7. **Variation in Freshman Enrollment 1983 - 1987**

1983	*1984*	*% change*	*1985*	*%change*	*1986*	*%change*	*1987*	*%change*
Freshman enrollment								
11,679	11,142	-4.6	10,998	-1.3	11,203	1.9	11,520	2.8

III. Support and Control of Public Elementary/Secondary School

Role of the Department of Education

The Department of Education coordinates and supervises the educational programs of the 140 local public school systems which operate the state's kindergarten, elementary and secondary schools, also five special schools, including those for blind and deaf.

The Commissioner of Education, as the state's chief school officer, is responsible for the operation of the State Department of Education and is chief administrator of the public education system. The chief local administrators are the superintendents of the local school systems who implement the policies and regulations of the state system.

The State Board of Education sets policy and approves regulations for the State Department of Education to implement in administering state educational programs. This includes the approval of schools, regulating the certification of teachers, distributing and accounting for expenditures of school funds, responsibility for transportation and safety, instructional programs, issuance of diplomas, school lunch, supervision of schools and their administration, and the operation of four special schools.

Legislation creating the "Better Schools Program" placed the administration of the Career Ladder for teachers and school administrators under the governance of the SDE. The program requires that teachers and administrators be evaluated/rated through one of several procedures in order to qualify for progression within the Career Ladder program and extended financial benefits.

Role of Local Education Agencies

Local Education Agencies in Tennessee are county districts, city or town districts, or special districts. There are four special schools that are operated under control of the Tennessee State Department of Education and funded by state appropriation. The Chief Executive Officer of the county districts is usually an elected Superintendent. Superintendents in city or town districts and special districts may be appointed or elected.

The LEA in Tennessee derives its authority as an extension of the state and has the reponsibility to provide an educational program for all children from kindergarten through twelfth grade. City or county governmental authority has the power to approve the LEA budget and provide funding.

Significant measures to enhance LEA educational programs have been created through the "Better Schools Program". High priority has been given to the Basic Skills program and the Computer Skills Next program. Under the Career Ladder program, LEAs participate in inservice training, fast-tracking, evaluating and rating the performance of faculty and administrator. The local district also has responsibility for effective utilization of differentiated staffing as instructional personnel progress up the ladder resulting from the Career Ladder program.

State/Local/Federal Share of Support

Federal funds received as part of school revenues for 1986 and 1987 show Tennessee ranking third in the nation as a recipient of federal funds in 1986 with a percentage of 12.2 percent of funds received from federal sources. In 1987 this amount decreased and Tennessee received only 11.1 percent of school revenues via federal funds providing a ranking of nine. The United States' mean for percentage of federal funds was 6.4 percent. The states of Tennessee (11.1%), New Mexico (12.2%), Arkansas (11.5%) and Mississippi (10.5%) all exceeded the national mean (Education Daily). Twenty-two percent of all the states received 10-12 percent of federal funds, fifty percent of the states received 5-9 percent of federal funds, and 28 percent received 3-4 percent of federal funds.

In Tennessee, the funding percentages for education changed from 1973 to 1986. Federal funds in 1973 were 13.1 percent decreasing to 9.7 percent in 1986. State funding increased from 45.1 percent in 1973 to 50 percent in 1986. Local funding for education decreased slightly from 41.8 percent in 1973 to 40.3 percent in 1986 (Education Vital Signs).

The greater part of school funds is derived from the retail sales tax, both state and local. Where local government has levied the maximum permitted, the citizens of Tennessee now pay 7.75 percent sales tax on most purchases. Local schools in Tennesee derive most of their local revenues from property taxes and tax rates are controlled by local government.

Each county in Tennessee has a county school district. Other districts (city or special) have been created from within the county districts. Because city and special districts were created from within the county districts, taxpayers who contribute to the revenues of the city and special districts are also taxed to support the county district. This precipitates unique revenue sharing situations in order to avoid double taxation. When a county school district sells bonds for capital outlay, they are required by Tennessee Code to share the proceeds with the city and/or special school districts within the county.

The Annual Statistical Report for the State of Tennessee, Department of Education for 1987 revealed that federal funds received through the state in the form of ECIA Chapter 1 funds totaled $65,475,250, and ECIA Chapter 2 funds totaled $7,625,042. Federal funds received directly from the government included revenue sharing ($3,253,012), PL874 ($4,673,089), ROTC ($1,395,920), Energy Grant ($1,657,695), and Title VII Bilingual ($341,384).

The Tennessee budget for education in 1989-1990 specified $1,370,081,700 for K-12 and $728,137,000 for higher education from state funds. Federal funds requested are $254,500,900 for K-12 education and $20,785,100 for higher education. A chart of these requests plus totals follows.

Table 8. **TENNESSEE BUDGET: 1989-1990**

	State Funding	Federal Funding
K-12 Education	1,370,081,700	254,500,900
Higher Education	728,137,000	20,785,100
Total	2,098,218,700	275,286,000

	Other	**Grand Total**
K-12 Education	3,904,100	**1,628,486,700**
Higher Education	7,979,600	**756,901,700**
Total	11,883,700	**2,385,388,400**

Per Pupil Expenditures

Tennessee rose slightly from a ranking of 46 in 1986 with expenditures of $2612 per pupil to 45 in 1987 with expenditures of $2827 per pupil. This compared with a national mean of per pupil expenditures of $3756 in 1986 increasing to $3977 in 1987. Tennessee, Arkansas, Mississippi, Utah, Alabama, and Idaho all ranked below the national per pupil expenditures in 1987 with expenditures ranging from $2350 to $2827 with Tennessee having the greatest amount of expenditure. Tennessee has made strides in this area rising from a 1973 per pupil expenditure of $813 to $2,533 in 1985 and finally to $2827 in 1987. The highest per pupil expenditures were in Alaska which expended $8010 on each pupil. (Education Daily)

Role of Local Education Agencies

The approval of schools is a cooperative effort between local school systems and the State Department of Education. Each School develops its instructional program within the system and state frameworks. Local school systems develop and implement their own system-wide grading policies adhering to the state established minimum standard of 70 percent for passing and based on subject matter presented.

LEAs also incorporate principles for evaluation of Career Ladder and non-Career Ladder teachers which includes procedures for recommendation for advancement of Career Ladder teachers and creation of individual improvement plans.

General Education Policies and Testing

The Tennessee State Board of Education sets forth general policies and regulations for all public schools in the state. The regulations are closely prescriptive, especially in such areas as graduation requirements, school services, curriculum, approval for special education programs, approval of facilities and transportation, salary schedules, staffing, and testing.

Various programs exist for the enhancement of student progress and for addressing the needs of specific areas of the state. Exemplary programs are listed below:

- •Basic Skills Improvement Program provides assistance to local educational agencies and to state staff to develop and implement comprehensive programs to improve basic skills proficiency and instruction in elementary and secondary schools, especially in the areas of reading, mathematics, and language arts
- •Computer Skills Program provides technical assistance and training for computer literacy and education to local school systems
- •Classroom Discipline/Alternative Programs support classroom teachers in their efforts to educate students who want to learn by creating alternative programs for disruptive students
- •Program for Gifted Students rewards academic excellence in gifted high school juniors and seniors through the establishment of residential summer schools.

The Tennessee Comprehensive Assessment Program (TCAP) to be implemented in the school year 1989-90 has been established and will consist of two norm-referenced and criterion-referenced tests for grades two through eight, and a norm referenced test in grade ten. A writing assessment component of the new testing program will likely be ready for implementation in the school year 1991-92.

IV. The Role of Higher Education in Public Elementary/Secondary Education

Special Legislative/Policy Requirements

Several new and impactful policies and procedures have recently been adopted by the state. The State Board of Education has adopted the recommendation of the Commissioner of Education to require local boards of education to develop five year plans, including a mission statement, goals, objectives, and strategies. These plans are required as of July 1, 1990. The Board also adopted a policy of reciprocity of licensure for teacher applicants trained in other states which will be effective March 1, 1990. In other measures, the Board added 11 specialty area tests to be taken by teacher candidates in various teaching areas as a requirement for initial licensure, bringing the total required to 36 specialty area tests.

New licensure standards for teahers in special education, health, physical education and occupational education have been delineated following the recommendations of the Advisory Council on Teacher Education and Certification for teacher candidates seeking initial licensure after May 1, 1995. Included in the reconstruction were standards for a new license in preschool/early childhood special education.

The continuation of experimental internship and post-baccalaureate teacher education programs currently underway at the University of Tennessee-Knoxville, Memphis State University, and Belmont College was confirmed. A total of six institutions have been approved for experimental induction programs to be operational during 1989-90.

These experimental programs have particularly focused on attracting outstanding persons already holding baccalaureate degrees into teaching. One plan featured a full-year internship, stipend support, and resulted in certification. Another fifth-year plan focused on more gradual immersion into teaching and produced certification with a Master of Arts in Teaching (MAT) degree.

Inservice Preparation of Education Personnel

In the area of leadership, the Tennessee Academy for School Leaders (TASL) has emphasized programs and ways to offer strong instructional leadership in its institutes. TASL has worked with administrators to help them improve evaluation skills, and has, in addition, offered sessions on improving school climate. The Tennessee Executive Development Program for Public School Leaders has begun to work with practitioners to share practices for use of test results for instructional improvement and to expose leaders to the most current theory and practice of effective schooling.

Preservice Preparation of Education Personnel

The state's new policy for teacher education in Tennessee adopted in 1988 is being phased in over an eight-year period with the first students to graduate under the new standards by 1994. A ten-member task force has been convened by the Department of Education to help guide the implementation process. More meaningful student teaching experience and greater assistance for beginning teachers are objectives which will help ensure their success in the classrooms.

Teacher preparation coursework requirements have undergone some extensive changes and are particularly important in the preservice preparation of practitioners. Updated 1988 requirements published by State Education Indicators are depicted in Table 8.

Table 9. **Teacher Preparation Coursework Requirements**

	Professional Ed Hours		*General Education*	
	Elementary	Secondary	Elementary	Secondary
Tennessee	26 hours	24 hours	64 hours	40 (varies w/cert
Mississipp	No Policy	------------	---------------	-----------------
Arkansas	18 hours	18 hours	32 hours	23-36 hours
Kentucky	30-39 hours	25 hours	21-48 hours	51 hours

Assessment Requirements

	Admission to TE	*Exit/TE*	*Initial Certification*	*Permanent Cert.*
Tennessee	PS	----------	PS,CK	----------------
Mississippi	BS	IO	BS,PS,CK	IO
Arkansas	BS	IO	PS,CK	PS, CK
Kentucky	BS	PS, CK, IO	PS, CK, IO	PS, CK, IO

BS/basic skills, PS/professional skills, CK/content knowledge, IO/inclass observation

Consideration of tests for admission to teacher education programs has led to a rule change which modifies the test requirements for candidates applying for entrance into approved teacher education programs. The rule change will allow candidates two additional options in lieu of the Pre-Professional Skills Test (PPST) by accepting an ACT composite score of 21 or above or a composite score of 22 or above on the Enhanced ACT, a combined verbal and mathematics score on the SAT of 990 or above, or a previously attained Bachelor's Degree.

The Influence of Higher Education on Public Education

More rigorous requirements for admission to higher education institutions in Tennessee have been established and stipulate specific high school courses that must be taken for admission to six SBR universities in the state. With two exceptions, the Board of Regent's requirements now are the same as those at the four main campuses of the University of Tennessee System.

Inservice Training for Teachers

Tennessee was one of the first states to stress the importance of curriculum improvement by initiating paid inservice education and has had 10 days of inservice education with pay since 1957. Significant progress has been made in inservice education in the state since 1957, and approximately $24 million dollars is provided annually for approved inservice activities.

Each school develops and implements a program of inservice education designed to improve the school curriculum and promote the continuous professional growth of all personnel. The Commissioner of Education develops inservice guidelines consistent with the Comprehensive Education Reform Act (CERA) and disseminates these guidelines to each LEA. Technical assistance from the Department of Education to local school systems ensure that the special needs of probationary and apprentice teachers are met.

School systems are required by Tennessee law to maintain an inservice training period of not less than 10 days according to a plan recommended by the local superintendent of schools and adopted by the local board of education. Guidelines call for a system-wide inservice planning committee in each system to be composed of the superientendent, an instructor, supervisor, a principal and a teacher. LEAs are urged to involve college or university consultants, parents, and appropriate agencies.

Technical Assistance and Other Support Services

College and university personnel in Tennessee are continually reminded of the triad--teaching, research, and service--that defines their life. In Tennessee, the service aspect is a dominant one. The teacher educator is an organization person and dedicated to his profession. In addition to assisting LEAs in developing effective inservice activities, outreach programs exist where each school district in the service area has a liaison faculty member designated as a higher education contact person for individual school systems.

Listed below are examples of the assistance and support that is offered and rendered by colleges and universities in Tennessee.

1) School survey studies
2) Organization of test programs with scoring and analysis
3) Inservice seminars and workshops
4) Consultative services in instructional development
5) Research studies on grade inflation and effective utilization of transportation.
6) Needs assessment of both academic and physical plant
7) Consultative services for administrative improvement
8) Continuing education and life-long learning activities
9) Evaluative techniques: planning, design, and application.

Many of these services are provided and evaluated by the Comprehensive Education Reform Act (CERA) which assesses beneficial outcomes of higher education involvement by requiring a yearly report from institutions regarding their activities in local school systems.

V. Trends in Public Elementary and Secondary Education

Trends and Their Current Impact

In the aftermath of the publication of *The Imperiled Generation* by Secretary of Education William Bennett, concern has mounted regarding the academic value of national high school education. Several states have adopted tougher standards aimed at better preparing students for college, reducing college dropout rates, and producing higher quality graduates. Dr. Bert C. Bach, vice-chancellor for academic affairs for the state board, estimates that the Tennessee state system spends $15 million a year on college courses that should have been taught in high school.

Consequently, high school credit requirements for college admission have been strengthened considerably. It is expected that a strengthened high school degree will reduce the number of students who must take remedial courses which can include as much as 50 percent of entering Freshman classes.

Teacher Education Trends

New teacher licensure standards emphasizing current concepts of excellence in teacher education have been constructed for several teaching majors, including special education, health, physical education, and occupational education. These recommendations also include standards for a new license for preschool/early childhood special education teachers, as mandated by the General Assembly in the Spring, 1988.

The need for a more comprehensive academic preparation for all elementary education pre-teachers preparing to teach K-8 has led to the development of recommendations for innovative majors which integrate knowledge across the disciplines. For early childhood and elementary teachers, two interdisciplinary majors have been constructed. The first is a content-oriented major including study in several subjects taught in elementary grades combined with study of disciplines related to how children learn in the context of their environment. An interdisciplinary major in human learning draws upon fields such as psychology, sociology, cultural anthropology, and child development and is particularly appropriate for early childhood teachers.

For middle grade teachers two interdisciplinary majors have also been created. The first is a major in two disciplines which may be any combination of subjects taught in the middle grades. The second is a major in a single discipline with an area of emphasis in at least one additional discipline outside the major. These interdisciplinary majors are carefully designed to coordinate among participating disciplines and are accompanied by academic advisement for prospective teachers.

An early childhood endorsement for public school pre-kindergarten will be developed and brought to the Advisory Council in Spring, 1989. The endorsement recommendation will be developed jointly with representatives of the Department of Human Services and pre-kindergarten programs.

Technological Innovations in Education

Satellite-based instruction is bringing new learning options to Tennessee students in remote or isolated classrooms. A $200,000 state appropriation has enabled the Tennessee Department of Education to fully equip a total of 14 pilot sites for satellite instructional programming. Students in rural or sparsely populated areas of Tennessee will have the same opportunity to take advanced mathematics, science and foreign language courses as students in the larger school systems with broader course offerings. Daily lessons will be delivered live through a one-way video/ two-way audio system linking students with teachers. A local certified teacher serving as classroom facilitator at each project site will be a key factor in the success of students enrolled in the distance learning courses.

Enrichment programs will put students in touch with professionals from a variety of mainstream and nontraditional occupations, including songwriters, authors, scientists and astronauts. Basic skills noncredit sessions in mathematics and English will be available for students needing remediation. Intensive review courses will provide interested college-bound students with rigorous preparation for taking the PSAT, SAT and ACT college entrance exams. Each participating school will follow a live televised program schedule and course outline and use textbooks approved by the State Department of Education.

Several other Tennessee school systems will be providing distance learning opportunities through satellite dishes donated to schools by area businesses and local utilities cooperatives. The TI-IN Network is a multi-state venture that provides exemplary programming in partnership with several state departments of education and state universities.

Vocational Education Initiatives

Recent vocational education initiatives have resulted in more than $2 million in multiple pilot projects being tested in schools across the state of Tennessee. These state-managed pilots are reshaping the vocational curriculum, giving vocational students more intensive exposure to curriculum basics, providing students with course content that more nearly parallels that of the college-bound student, and better preparing them for the world of work.

Major Problems and Special Issues

Tennessee is addressing the needs of students at risk of dropping out of school through a 15-point comprehensive program with elements reaching from pre-school through high school. Measures that will be utilized are as follows:

- Funding class size reductions in the primary grades
- Identification of student and curriculum deficencies through state-administered, standardized testing programs
- School-age child care programs
- Parenting skills programs to help parents work with the pre-school youngsters on school readiness skills
- One-room, drop-in schools and after-school learning centers in urban housing projects
- Appointment of a statewide director of dropout prevention
- In-school suspension programs to keep disruptive students in school at alternative school centers
- Drug Free Tennessee program
- Comprehensive career awareness programs focused on at-risk students
- School-to-work transition training programs
- Incentive grants for pregnant teenagers and teenage parents to learn parenting skills
- Comprehensive family life programs
- Essential reading and mathematics skills for public elementary schools

These programs have been built on the premise that nearly every student can experience success in school, provided appropriate programs and services are available.

Other special issue activities include consideration of reciprocity of licensure for applicants trained in other states and is directed to persons who apply for teaching positions in Tennessee but have been trained in other states. Under a new recommended rule change, Tennessee will establish reciprocal agreements with other states belonging to the Interstate Certification Project (ICP). This policy will award licensure to applicants from other states which are NCATE accredited or affiliated and also establish procedures to award licensure to applicants from other states after a review of those states' teacher education program approval procedures.

The Tennessee Student Assistance Corporation (TSAC) maintains activities relative to teacher loan/scholarship programs. TSAC manages programs which provide forgivable loans to college students preparing to be mathematics, science, elementary music, and elementary art teachers or to teach in disadvantaged areas of the state. A new program mandated by the General Assembly will provide forgivable loans to minority students preparing to be teachers.

Strengths of Tennessee Educational Systems

One of the significant strengths of the Tennessee educational system is the Comprehensive Education Reform Act (CERA) of 1984 which provides teachers the opportunity to advance financially and positionally within the state system. The State Board of Education has emphasized the participation of principals in the evaluation system for a number of years. The State Certification Commission recently recommended that local administrators be included on evaluation teams for Career Level II and III teachers. This move demonstrates the desire of state administrators to encourage principals to demonstrate their ability and willingness to improve the evaluation system through their involvement.

The Career Ladder options also include teachers and administrators in adult education programs among those eligible for Career Ladder evaluation and status. Such individuals are now eligible for carry-over of Career Ladder salary supplements when they change position.

The Creative Teaching Mini-Grant Program encourages and rewards creative teaching by Tennessee classroom teachers. Teaching proposals selected by the program become part of a teacher-to-teacher network and are presented in a booklet showcasing the creative teachers and their winning projects.

Statewide Needs of Tennessee

Adult Literacy Initiative. Tennessee has begun a statewide effort to help all nonreading adults learn to read, write and do basic math well enough to lead independent, productive lives. The objective of the Literacy 2000 program is to give every Tennessean the opportunity to learn reading and writing skills by the end of this century with a goal of 90 percent literacy for the state's adult population.

According to the Education Commission of the States, Tennessee's Literacy 2000 program is one of just two comprehensive statewide programs in the nation aimed at wiping out adult illiteracy. Focused efforts to date are:

•More than 72 full-time programs are in place, compared to no full-time programs two years ago

•Establishment of programs in 8 housing projects in Knoxville and Nashville and in more than 20 workplace locations in businesses and industries

•Reconstruction of Adult Basic Education (ABE) into a three-tiered, spiraling program more efficiently identifying adult learning needs

•Expansion of service to the Department of Corrections to establish beginning literacy programs in prisons

•Creation of literacy graduation certificates based on proficiency requirements and literacy attainment levels.

Through the spiraling literacy effort, a greater number of adults are being brought up to the literacy level required to begin GED preparation.

Enhancing the teaching profession . A major initiative in Tennessee has been to raise the status of the teaching profession and to make teaching a more viable career option for quality students. To make the teaching profession more attractive, the state is raising starting salaries, making overall teachers' salaries more competitive, and improving the workplace.

The governor's salary initiative has moved Tennessee from 38th to 34th in the nation in the ranking of average salaries for classroom teachers. In the Southeast, Tennessee teachers' salaries have advanced from 7th to 5th, making the Tennessee figure above the average for the southeastern states (Tennessee Department of Education, 1989).

Career ladder and related changes . Continuous efforts to improve the career ladder for teachers and administrators has produced major changes which have been approved by the Tennessee General Assembly.

*The program was made optional for all educators in Tennessee

*The certification period was extended and licensure made separate from career ladder certification

*One-year probationary period and three-year apprentice periods were made part of the licensure system for all beginning teachers.

In addition to the legislative changes, the career ladder system has been made easier to understand and more related to sound teaching practices. The time span of the evaluation process has been shortened and paperwork requirements reduced. Research and piloting programs are being conducted on quality of life factors that enhance the teaching profession and, in turn, make a positive difference in student learning outcomes.

Recruitment of minority teachers . Tennessee has joined forces with neighboring states in a collaborative effort to increase the number of minority teachers in the public schools through scholarships, forgivable loans, and other special incentives. The Partnership to Assist Student Success (PASS) assists minority high school students in Tennessee who want to prepare for the teaching profession but lack the financial means. The state is developing a job bank to match teaching position vacancies with qualified minority teacher applicants which will provide for counseling and interviewing services, scholarship information, and career awareness information.

Parent and community involvement. A new Governor's A+ Award for Community Commitment for Excellence in Education will be presented to communities in which schools meet specific, comprehensive criteria for educational programs and services. The Tennessee Partners in Education Conference was held in the fall of 1988 to promote involvement of business partners and chambers of commerce in education. A Family Involvement Conference, involving parents and local school system educators, was held in May, 1989.

Funding and Accountability. Accountability is a prerequisite to any effort to bring about meaningful tax reform in Tennessee or to change the funding formula for K-12 education. The State Board of Education will require school systems to submit goals and performance standards as part of the school approval process administered by the Department of Education.

Tennessee Caucus Group. The Appalachia Educational Laboratory held a conference (Virginia Beach, July 22, 1989) for the State Caucus Group to identify and prioritize the educational needs in Tennessee. The top ten needs identified in rank order were as follows:

1. Programs to enhance the functioning of local boards of education.
2. Ways to ensure that educational policy is informed by the outcomes of educational research and development.
3. Improvements in professional development programs for teachers and school administrators.
4. Programs that address the special needs of small, rural schools.
5. Improvements in the involvement in decision making of those implementing and those affected by decisions at the school level.
6. Provide programs to address the special needs of minority students and community members.
7. Improve instructional programming for middle school-age students.
8. Study and report on innovative programs to improve teacher preparation, induction, and professional development.
9. More community support of local public schools.
10. Programs to improve adult literacy.

The Tennessee State Caucus Group concluded that a favorable climate existed for addressing the need areas as reflected by recent activities at the policy and law-making levels. Also, some activities have been initiated in the need areas through the State Department of Education, Higher Education and at the local school levels. Research and development products for the various areas were not as available to guide decision-making and policy formation. AEL was viewed as an agency that could assist through their resources in facilitating the R & D information.

VI. R& D Resources Available to Support Elementary/Secondary Education

Higher Education

A number of research units exist within the institutions of higher education in the state for the support of educational research and development. For example, housed at Memphis State University are the Center of Excellence in Teacher Education, the Bureau of Educational Research and Services, the Center for Environmental and Energy Education, the Center for the Study of Higher Education, and the Earthquake Center. The University of Tennessee at Knoxville, Vanderbilt University, and other higher education institutions have similar support units.

Programs such as the four-year Project STAR study that examined the impact of reduced class size on student achievement in grades K-3 are indicative of the services rendered by research facilities of higher education institutions. This study attested that students in smaller classes outperformed those in traditional 25-1 student-to-teacher classes. The most dramatic improvements were among lower-income students. Consequently, the state will contribute $2.8 million for implementation of these findings in 44 schools in 13 districts which will have their class sizes reduced to 15 students per teachers in kindergarten through third grade. An additional $1.3 million in federal funds will also be utilized.

Private Organizations

Many non-profit organizations have extensive organizational capabilities and extend their resources to work with educational units within the state. The Carnegie Corporation of New York has funded *Project 30* , an innovative effort involving 30 universities across the nation, to utilize collaborative efforts of Arts & Sciences faculty and Education faculty to identify and attract elementary and high school students to the science teaching field. With an intensive focus on minorities, this project reaches out to high school science teachers involving them in university academic activities.

The Ford Foundation Grant for Clinical Training Sites enhances the collaboration of public school systems and teacher organizations to develop training sites for clinical experiences for teacher education candidates. Elementary sites for 1989-90 have been identified which represent the demographic make-up of the area and will serve as student teaching locations for pre-teaching majors.

Professional Associations

Tennessee has representation from a variety of national professional organizations as well as state, regional, and local units. These organizations are generally involved in educational decision making in the state. They contribute meaningful communication resources and provide training and technical assistance to the education profession. Examples of these associations in Tennessee are:

Tennessee School Boards Association
Tennessee Association for Supervision and Curriculum Development
Tennessee Association of School Administrators
Mid-South Educational Research Association
Mid-South Association of Educational Data Systems
Tennessee Association for Children Under Six
Tennessee Association of Elementary School Principals
Tennessee Association of Secondary School Principals
Tennessee Education Association
Tennessee Federation of Teachers
Tennessee Association of Colleges of Teacher Education

Summary

Political leadership for the past six years has emphasized the importance of education of young people and adults. Legislation has been supportive with increased funding and programmatic guidelines and policies. Initiatives to improve the curriculum through close monitoring of standardized achievement results has increased public awareness which has fostered more grass roots support for education. The State has recognized the importance of research and development in formulating educational policy by funding Centers of Excellence in the higher education system. Teacher education has undergone major reconstruction to ensure more qualified teachers to meet future supply and demand needs. Generally, a favorable climate exists to improve the quality of education in Tennessee. However, the means of financing initiatives is still tentative within the present tax structure. New tax revenues are at the forefront of political discussions and appear to be necessary for continuing educational development in the State.

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Appendix I
VA State Report

Education in the Commonwealth:
Where Virginia is Headed in the 1990's

PREPARED FOR

Appalachia Educational Laboratory

Charleston, West Virginia

Yvonne Vest Thayer

Radford, Virginia

September, 1989

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This report was prepared for the Appalachia Educational Laboratory by Yvonne Vest Thayer. Ms. Thayer is Director of Professional Development for the Radford City Schools, Radford, VA. On October 1, 1989, Ms. Thayer assumes the position of Special Assistant for Leadership Development at the Virginia Department of Education.

INTRODUCTION

This report on the status of education in the Commonwealth of Virginia was prepared for the Appalachia Educational Laboratory in Charleston, West Virginia. This document follows a similar report prepared in 1985 by Charles P. Ruch. The purpose of this 1989 report is to update AEL on the conditions which surround and impact upon education in Virginia, especially as they have changed or remained unchanged since the 1985 report. The 1985 report cited a great deal of data which was gathered during the 1980 census. Since much of that information has not been retraced since the census report and will be reported only after the 1990 census, the author believes it would be redundant to repeat that information. An attempt was made in this report to include quantitative information which is pertinent or more recent than the 1985 report. Even greater focus is placed on initiatives and mandates, as well as the absence of same, which impact daily on the lives of students, teachers, administrators, and policy makers in Virginia.

This report will focus on the following areas:

(1) general demography,

(2) educational demography,

(3) control and support of public elementary and secondary education,

(4) role of higher education in public elementary and secondary education,

(5) trends in public elementary and secondary education,

(6) educational needs as identified by the AEL Board members from Virginia,

(7) summary of major needs in Virginia,

(8) research and development resources available to support elementary and secondary education, and

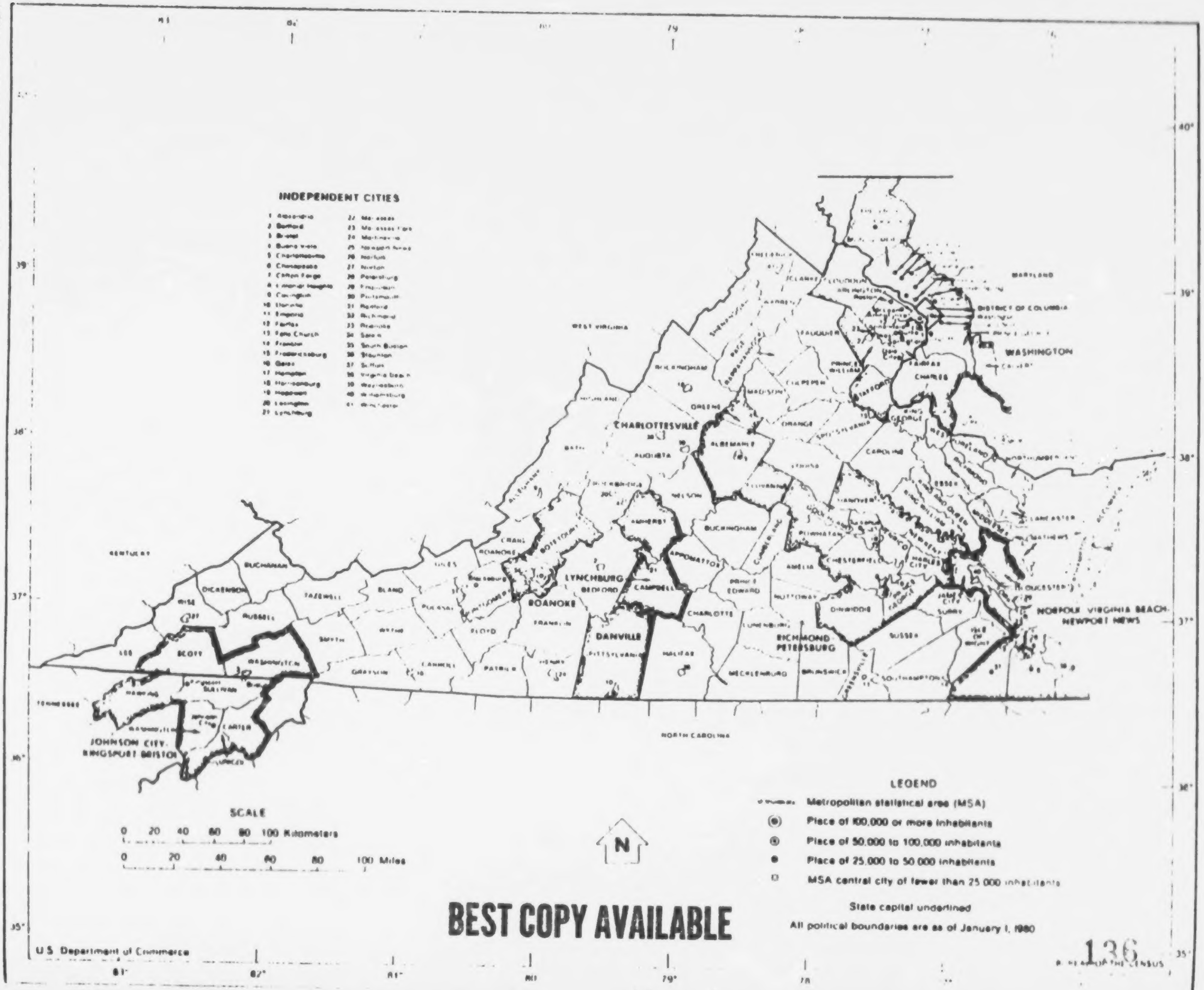
(9) recommendations of priority topics for AEL programming.

The Commonwealth of Virginia is diverse in its geographical features, styles of living, income levels, and on-going, ever-changing needs in education. While some school divisions are struggling to meet mandates for improvements in teacher salaries, others have developed career ladder pay systems. While some teachers have received training in Hunter's direct instruction model or McCarthy's 4MAT Learning Styles program or Johnson and Johnson's strategies for cooperative learning (and may be evaluated on the implementation of such models in the classroom), other teachers are still unfamiliar with the research on effective teaching which has been disseminated during the last decade. While some gifted students attend regional magnet schools, others remain in traditional classrooms using standard curricula under the direction of teachers not trained to modify curriculum for the gifted. While some five-year-olds attend kindergarten three hours a day, others have breakfast, lunch and afternoon snack in a full day program. Seventh grade students may be found in elementary, middle, or junior high schools. Some kindergarten students are using computers daily to learn to read and write in IBM's Writing to Read program, and yet secondary students are graduating each year without computer literacy skills needed to enter the job market or function in a university.

Virginia is a state with much diversity in its schools. And this same diversity is found in the value systems of the people who must support the schools with tax dollars. In order for an agency, such as AEL, to effectively assess the needs of Virginia's educators and students, it must have a sense of this diversity and the disparity in education which may be a result. A report of this nature cannot be contained in a short document. The author alerts the reader that this paper cannot possibly discuss all variables which are shaping education in Virginia during 1989 or will impact upon education in the next decade. This report in part reflects the experiences and biases of a public school educator who has observed the cast of players on the education stage enlarge during the past decade. The stars of the productions are still the teachers but the directors are housed in various buildings in Richmond. The administrator-stagehands provide the props and control the lighting, but they are no longer writing the script.

VIRGINIA - Metropolitan Statistical Areas, Counties, Independent Cities, and Other Selected Places

MSA boundaries are as defined on June 30, 1983


WEST VIRGINIA
KENTUCKY
TENNESSEE
NORTH CAROLINA
MARYLAND
DISTRICT OF COLUMBIA
WASHINGTON
CHARLOTTESVILLE
LYNCHBURG
ROANOKE
DANVILLE
RICHMOND-PETERSBURG
NORFOLK-VIRGINIA BEACH-NEWPORT NEWS
JOHNSON CITY-KINGSPORT-BRISTOL
BUCHANAN
DICKENSON
WISE
LEE
SCOTT
RUSSELL
WASHINGTON
TAZEWELL
SMYTH
BLAND
GRAYSON
GILES
PULASKI
WYTHE
CARROLL
FLOYD
PATRICK
FRANKLIN
HENRY
CRAIG
ROANOKE
BOTETOURT
BEDFORD
CAMPBELL
PITTSYLVANIA
HALIFAX
AMHERST
APPOMATTOX
CHARLOTTE
MECKLENBURG
BRUNSWICK
BUCKINGHAM
CUMBERLAND
PRINCE EDWARD
NOTTOWAY
AMELIA
DINWIDDIE
SUSSEX
SOUTHAMPTON
SURRY
POWHATAN
CHESTERFIELD
HANOVER
HIGHLAND
BATH
AUGUSTA
ROCKINGHAM
GREENE
ALBEMARLE
NELSON
MADISON
CULPEPER
ORANGE
SPOTSYLVANIA
CAROLINE
FAUQUIER
PRINCE WILLIAM
STAFFORD
KING GEORGE
WESTMORELAND
ESSEX
LANCASTER
MATHEWS
GLOUCESTER
JAMES CITY
ISLE OF WIGHT
CHARLES CITY
LOUDOUN
FAIRFAX
CLARKE
FREDERICK
WARREN
PAGE
SHENANDOAH
RAPPAHANNOCK
ARLINGTON
CHARLES
CAROLINE
SCALE
0 20 40 60 80 100 Kilometers
0 20 40 60 80 100 Miles
N

INDEPENDENT CITIES

1	Alexandria	22	Manassas
2	Bedford	23	Manassas Park
3	Bristol	24	Martinsville
4	Buena Vista	25	Newport News
5	Charlottesville	26	Norfolk
6	Chesapeake	27	Norton
7	Clifton Forge	28	Petersburg
8	Colonial Heights	29	Poquoson
9	Covington	30	Portsmouth
10	Danville	31	Radford
11	Emporia	32	Richmond
12	Fairfax	33	Roanoke
13	Falls Church	34	Salem
14	Franklin	35	South Boston
15	Fredericksburg	36	Staunton
16	Galax	37	Suffolk
17	Hampton	38	Virginia Beach
18	Harrisonburg	39	Waynesboro
19	Hopewell	40	Williamsburg
20	Lexington	41	Winchester
21	Lynchburg		

LEGEND

▬	Metropolitan statistical area (MSA)
◉	Place of 100,000 or more inhabitants
⊙	Place of 50,000 to 100,000 inhabitants
●	Place of 25,000 to 50,000 inhabitants
○	MSA central city of fewer than 25,000 inhabitants

State capital underlined

All political boundaries are as of January 1, 1980

U.S. Department of Commerce

Bureau of the Census

Figure 1

BEST COPY AVAILABLE

135

GENERAL DEMOGRAPHY

In order to understand Virginia's educational system, one must understand the demographic characteristics of the state. In the discussion which follows, unless otherwise noted, demographic statistics are provided by the Bureau of the Census.[1]

The Commonwealth's 95 counties and 41 independent cities had a population of 5,787,000 in 1986. This represented growth of 8.2% since 1980. Growth of 15% or more was seen in the following localities:

Counties		**Cities**	
Chesterfield	**21.9**	**Chesapeake**	**17.4**
Fairfax	**19.3**	**Manassas**	**29.9**
Fauquier	**17.1**	**Poquoson**	**16.3**
Gloucester	**40.5**	**Virginia Beach**	**27.2**
James City	**19.3**		
Loudoun	**16.3**		
New Kent	**17.9**		
Prince William	**21.2**		
Spotsylvania	**23.2**		
Stafford	**23.8**		

Major growth in Virginia is occurring in the eastern and northern areas of the state, sometimes referred to as the urban crescent. This area runs from the Washington metropolitan area, through Richmond, to Tidewater.

However, 37 of the 136 localities felt a decline in population during this seven year period. The percentages of decline were not as dramatic as those for growth. The five localities which experienced the greatest declines were:

Covington City	**-12.4**
Bath County	**-10.7**
Sussex County	**-7.1**
Dinwiddie County	**-6.7**
Buena Vista City	**-6.4**

In 1980, 79.1% of Virginia's population was Caucasian. By 1984, that figure had declined to 78.74%, with a minority population in Virginia of 21.26%. Those areas which showed that greatest growth in population generally reflect white communities. With the exception of Chesapeake, Poquoson, and James City, the cities with the high growth rate are composed of predominantly white populations, those rates exceeding the state average. Those counties and cities in which the minority population exceeds 40% are Dinwiddie, Halifax, Petersburg (66%), Portsmouth, Richmond City (53%), and Suffolk.

Per capita money income in 1985 was $11,894, showing 59.1% increase from 1979. Income percentages varied from a low of 24.2% in Richlands (Tazewell County) which has been depressed by the coal industry to a high of 70.2% in Galax City (also Southwest Virginia). The five localities with the highest growth in income were:

Alexandria	**62.5**
Galax	**70.2**
Martinsville	**69.6**
Vienna (Fairfax)	**63.5**
Williamsburg	**63.7**

The Commonwealth's per capita income growth from 1986-87 was 7.1%, ahead of the national average of 6.0%. The gross state product per school-age child increased 8.3% from 1985 to 1986; the U. S. grew 5.1% during that same period. The relative tax capacity in Virginia improved 2.2% also. Virginia is considered a Moderately High Relative Wealth state, barely lacking the gross state product amount to be placed in the highest category.[2]

Virginia's population is an adult population, with 61.4% of the population over 25 years of age. The decline felt in school age population, a result of the decline in children under five (8.4% in 1970 and 6.7% in 1980[3]) appears to have stabilized and is on its way back up. In 1984, 6.9% of the population was under age five. However, the school age population is slightly less in Virginia than in the nation as a whole. In 1987, 17.6% of Virginians were school age (5-17 years) as opposed to the U. S. average of 18.6%.[4]

Of importance to school officials is the percent of the population who do not have children in school and may be reluctant to support tax increases for education. In Virginia, 28.5 % -- nearly one-third -- of the population is age 45 or older; 32.9% of the population is 25 to 44 years old. So approximately 1/3 of the population in Virginia is school age or young parents, 1/3 of the population is parent age, and 1/3 of the population represents those in the grandparent category.

One of the factors associated with students at-risk of failure is the status of the family. Students who come from single parent homes are viewed as being more at-risk than students from traditional households. Census data indicates that 10.8% of Virginia homes are headed by a female (no spouse present). While not all of the localities with high percentages come from one area of the state, Southside Virginia appears to have a large percentage of single female homes. Some of the localities with these high percentages are:

Charles City	**14.7**
Danville	**14.6**
Emporia	**16.5**
Franklin	**19.2**
Greensville	**14.6**
Norfolk	**16.4**
Northampton	**14.8**
Petersburg	**19.9**
Portsmouth	**17.3**
Richmond City	**17.8**
Roanoke City	**14.4**
South Boston	**15.0**
Suffolk	**15.4**
Sussex	**14.2**

Discussion. Recent census statistics confirm the report made to AEL based upon 1980 data. Virginia is becoming a more urban state but only in the crescent area. While this area grows in population and wealth, a large part of Virginia remains rural. Virginia's per capita income grows throughout the state. Three of the five localities with the highest income growth are in the crescent, one is in Southside, and the third is in Southwest Virginia.

The demographic information suggests that AEL should be cognizant of the change Virginia is experiencing as it becomes more urban in nature. Formerly, Virginians felt that the dividing line between the haves and have nots was around Roanoke, isolating Southwest Virginia and minimizing its clout. The growth of the crescent in numbers and income level is rapidly shifting the dividing line to the east.

Virginia may experience unique problems in each of the areas of the state. For example, while the Shenandoah Valley and Southwest may continue to need support for rural education, Southside may need specific help with minority education and problems associated with single parenting. Northern and eastern Virginia may develop some of the problematic situations associated with urban education. There will no longer be one plan of action for serving Virginia's educational needs. The needs are specific and regional.

EDUCATIONAL DEMOGRAPHY

Public Elementary and Secondary Schools

The educational demographic information discussed in this section will lend further credence to the belief that Virginia's educational system is diverse and becoming more so. Unless otherwise noted, statistical information discussed in this section is furnished by the Virginia Department of Education.[5]

In Virginia, school districts are called divisions, reflective of the fact that each local municipality -- city, county or town -- operates its own school system. Currently, there are 138 school divisions in Virginia: 95 county divisions, 3 town divisions, and 40 city divisions. Some localities have merged with other divisions to jointly operate their school systems. For example, in 1987-88, the Town of Fries discontinued operating as a separate division and was merged with Grayson County; Alleghany Highlands is the merger of Alleghany County and Clifton Forge City. School boards in Virginia are appointed either by the governing body or by an electoral board appointed by a judge. The school board does not have the right to levy taxes in this state, so school budgets must be approved by the governing bodies and increases in taxes for the schools must come from either the city/town council or board of supervisors. For many years, proponents of elected school boards have lobbied in Virginia.

During the 1987-88 school year, 36,965.3 elementary teachers taught 604,136 students in K-7 and 27,385.1 secondary teachers instructed 357,303 students in 8-12. The public school membership on September 30 of 1987 represented an increase of .42% over the previous school year. End of year memberships ranged from 375 students in Highland County to 127,289 students in Fairfax County. There were 38 school divisions with enrollments of less than 2000 students, 10 with enrollments of less than 1000 students, K-12.

The average pupil teacher ratio for K-12 was 14.9 to 1. These ratios ranged from a low of 9.9 in Bath County to a high of 16.4 shared by Franklin City and the Counties of Lancaster and Spotsylvania. The average for the state showed improvement from the average of 15.9 in 1983, reported by the Department of Education and cited in Ruch's earlier report. However, one must be careful in drawing conclusions about these statistics. Low pupil teacher ratios can be an indication of either of two circumstances. As may be the case with Bath County and other small divisions, small ratios occur when small divisions provide diverse programs to their students. In order to provide the course offerings necessary for a secondary program or to minimize combination classes, teachers carry very small loads. The alternative situation which causes lower ratios is a deliberate attempt by the locality to lower class sizes or to institute new programs using local money. In either of these situations the locality is providing more than a minimal program in order to maintain a small division or to enlarge the program beyond state standards (or at least state funding).

Under a mandate from the General Assembly, Virginia's school divisions raised teachers salaries in 1988 to an average of $27,196, an increase of 8.6% over the previous year. This mandate which carried punitive action by the State if not observed, required divisions to raise salaries 10% or match the state average. The need for such a mandate is explained by the disparity in salaries in this state. While schools in the crescent average $34,603 (Fairfax), $36,627 (Arlington), and $28,412 (Norfolk), other school districts are far behind: Highland - $17,868; Lexington - $20,895; Rappahannock - $20,811; and Cumberland - $20,579. It should be noted that probably because of the salary mandate, places like Cumberland gave an average raise of 11.8% last year. Not all school divisions were able to comply with the mandate. Buchanan County only averaged an increase of 0.4% and Dickenson County had a negative increase; they lost 0.2% in their average salary. Both locations are victims of the economic depression of Southwest Virginia.

Average teacher salaries increased significantly over the last five years. A comparison of salary increases in Virginia to those nationally shows this state moving ahead but still below the national average.[6]

Average Teacher Salary Increases
Between 1983 and 1988

United States	**- $20,725 to $28,044 -**	**+35.3%**
Virginia	**- $18,535 to $27,181 -**	**+47.0%**

Another indicator of the diversity in Virginia's schools is the size of instructional staff in each division. In 1988, 65,068.8 instructional personnel worked in the schools. Examples of the diversity in size of staff follows.

NO. OF INSTRUCTIONAL PERSONNEL POSITIONS - 1988	
CHESTERFIELD	2,620.6
FAIRFAX COUNTY	8,164.2
HENRICO	2,110.2
NORFOLK	2,508.7
PRINCE WILLIAM	2,494.2
VIRGINIA BEACH	3,792.0
CRAIG	47.5
HIGHLAND	34.5
NORTON	61.8
RAPPAHANNOCK	68.6
SOUTH BOSTON	54.4
SURRY	74.0

During the last decade when national attention has been placed on education, much of the political rhetoric has focused on test scores as a measure of school success. Certainly assessment measures are helpful in determining program effectiveness, but in Virginia they serve an even greater role. All school divisions are required under accreditation and Standards of Quality [enacted by the legislature] to remediate students who score in the lowest quartile in reading and math. This mandate has forced educators to look at test scores differently and to design programs to raise these students' scores. While the intent is noble, educators understand that in a normal population one-fourth of the population will be in the lowest quartile by definition.

For the purpose of assessing Virginia's needs, a look at test scores is desirable. In 1987-88, Virginia began administering the Cognitive Abilities Tests in grade one, the Iowa Tests of Basic Skills in grades four and eight, and the Tests of Achievement and Proficiency in grade eleven. Many local divisions supplement the state testing by administering the Iowa battery in other grades, some giving the tests K-11. Comparison data for the state is only available for the grades tested in the state program. Since the Iowa battery has only been used for two years, it is too early to look for trends in the testing program. However it is important to consider Virginia's performance based on national norms. The following data was provided by the Virginia Department of Education.[7]

National Percentile Ranks of Virginia Mean Scores
Fall 1987 and Fall 1988
Grade 1

Cognitive Abilities Test

	Fall 1987	Fall 1988
VERBAL	56	58
QUANTITATIVE	54	55
NONVERBAL	71	72

National Percentile Ranks of Virginia Mean Scores
Spring 1988 and Spring 1989
Grades 4, 8, and 11

Iowa Tests of Basic Skills (Achievement)

GRADE	YEAR	VOCAB.	READING	LANG.	WORK/STUDY	MATH	SOC.ST.	SCIENCE
4	87-88	53	53	60	60	60	60	67
	88-89	53	54	60	60	60	59	67
8	87-88	51	54	57	56	56	56	59
	88-89	52	54	57	56	56	57	60

Tests of Achievement and Proficiency

GRADE	YEAR	READING	WRITTEN EXPRESS.	INFORMATION SOURCES	MATH	SOCIAL STUDIES	SCIENCE
11	87-88	58	62	58	56	61	62
	88-89	57	61	58	56	61	62

The test scores reported above are very consistent at each grade level. There appear to be no significant differences between the two years. On the CogAT given to students in the fall of their first grade year, Virginia students scored above the national average in all three cognitive ability areas. Fall 1988 first graders scored slightly higher on each of the Cognitive Abilities Test areas than first graders in the fall of 1987. The achievement tests given to grades four, eight, and eleven also yielded scores above the national average in all tested areas. Eighth graders performed slightly better the second year of the tests. Fourth graders improved in reading by one percentile score and declined in social studies by the same amount. Students in grade 11 declined in reading and written expression by one the second year.

The disparities in education so commonly discussed in the Commonwealth are no where more apparent than with test results. Consider the differences in the areas of basic skills between two very different school divisions .

	Grade 1			Grade 4			Grade 8			Grade 11		
	Verb	Quant	Nonv	Read	Lang	Math	Read	Lang	Math	Read	Writ	Math
Charles City												
1988	41	36	54	26	34	39	26	32	25	32	37	26
1989	41	52	62	29	41	33	38	45	43	43	50	34
Fairfax Co.												
1988	70	70	79	67	70	73	72	75	77	72	75	75
1989	70	69	79	67	67	71	72	75	77	70	72	74

The Department of Education furnished the following information which is helpful in determining if ethnic and gender differences present any particular challenges to educators in Virginia.

> In interpreting observed differences in the test performance of various groups of Virginia students, one must consider social and economic factors that have been known to affect how well students achieve in school. These factors include family income, level of mother's education, and non-English language home background. For more than fifty years, research studies have found that students from disadvan--taged family backgrounds tend to perform less well on achievement measures than students from advantaged backgrounds...
>
> Results of the 1988-89 Virginia State Assessment Program are consistent with these findings. Socioeconomic status, as measured by percentage of students in each school division who received free lunches in the National School Lunch Program, correlates highly with the division's fourth-, eighth-, and eleventh-grade achievement test scores. In this analysis, the ethnicity of the students does not correlate as highly with achievement test scores as the socioeconomic status measure. The results of another study are presented in Table [1]. This table shows that as the percentage of students receiving free lunches increases, the achievement test scores decrease. Thus, the socioeconomic characteristics of the various ethnic groups must be taken into consideration in any interpretation of test scores.
>
> Presented in Table [2] are national percentile ranks of state average scores on the first-grade test of cognitive abilities and on the achievement tests given to Virginia's students in grades 4, 8, and 11 for each ethnic and gender category. At the first-grade level, students of all ethnic groups and both gender categories obtained their highest percentile ranks on the nonverbal ability test and their lowest percentile ranks on the quantitative ability test. On the achievement tests given at grades 4, 8, and 11, Asian/Pacific Islander students obtained their highest scores in mathematics at all three grade levels and also in language and work-study skills at the fourth-grade level. Lowest scores for Asian/Pacific Islander students were in vocabulary at grade 4 and 8 and in reading comprehension at grade 11. Grade 4 Hispanic students achieved their highest scores in science and their lowest scores in vocabulary. Grade 8 Hispanic students achieved their highest scores in social studies and their lowest

TABLE 1

SPRING 1989 VIRGINIA STATE ASSESSMENT PROGRAM RESULTS FOR SCHOOL DIVISIONS BY GROUPS BASED ON COMPOSITE SCORES

GENERAL CHARACTERISTICS* OF DIVISIONS WITHIN EACH GROUP

	GROUP	NO. OF DIVISIONS IN GROUP	% OF STUDENTS ON FREE LUNCH	COMPOSITE	VSAP TEST** RESULTS IN NATIONAL PERCENTILE RANKS						
					V	RC	L	WSS	M	SS	SCI
	1	35	9.8	66	63	63	65	66	67	67	72
GRADE 4	2	35	16.9	57	52	52	56	59	58	58	65
	3	32	23.3	50	46	48	55	52	52	51	61
	4	31	33.7	43	38	39	46	45	44	42	53
	1	34	9.8	63	62	62	64	62	60	62	67
GRADE 8	2	31	18.1	52	48	52	55	54	51	54	59
	3	35	21.1	48	41	45	51	47	46	46	51
	4	32	34.5	42	36	42	44	43	40	41	44
					RC	M	WE	INFO	SS	SCI	
	1	31	9.8	65	63	63	67	65	66	69	
GRADE 11	2	31	17.7	55	55	53	60	56	59	59	
	3	34	21.1	49	48	44	54	49	52	54	
	4	35	29.8	42	41	38	48	43	46	45	

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* Average (i.e., median) measure or value is reported for each characteristic.

** Abbreviations for the VSAP tests refer to the following:
V - Vocabulary, RC - Reading Comprehension, L - Language, WSS - Work Study Skills,
M - Mathematics, SS - Social Studies, SCI - Science, WE - Written Expression,
INFO - Sources of Information

TABLE 2

PERCENTILE RANKS BY ETHNICITY AND GENDER
VIRGINIA STATE ASSESSMENT PROGRAM
1988-89

	Grade 1				Grade 4								Grade 8								Grade 11						
	Number Tested	Verbal	Quantitative	Nonverbal	Number Tested	Vocabulary	Reading	Language	Work-Study	Mathematics	Social Studies	Science	Number Tested	Vocabulary	Reading	Language	Work-Study	Mathematics	Social Studies	Science	Number Tested	Reading	Mathematics	Written Expression	Sources of Information	Social Studies	Science
State	*79,984*	58	55	72	*71,443*	53	54	60	60	60	59	67	*66,359*	52	54	57	56	56	57	60	*59,467*	57	56	61	58	61	62
Ethnicity																											
Asian/Pacific Islander	*1,812*	54	49	81	*1,956*	54	60	72	72	72	68	71	*2,028*	52	67	75	74	77	73	70	*2,136*	61	74	72	66	67	73
Hispanic	*1,243*	45	36	69	*1,073*	46	50	56	59	58	54	61	*1,069*	42	51	55	54	53	57	55	*883*	51	52	58	52	54	57
Black	*19,649*	33	26	56	*17,828*	34	36	48	43	42	39	50	*14,863*	32	36	43	39	36	39	40	*12,037*	34	32	44	35	42	39
Native American	*1,492*	67	66	73	*303*	52	52	56	55	58	59	64	*919*	52	52	54	54	54	55	60	*914*	52	49	54	51	55	58
White	*50,479*	68	64	76	*49,558*	62	61	63	65	66	67	71	*46,394*	59	59	62	62	61	62	66	*42,756*	63	61	66	64	66	69
Gender																											
Female	*38,563*	56	55	73	*35,475*	53	57	64	61	60	59	66	*32,735*	51	59	65	60	57	55	59	*29,926*	59	55	68	59	58	57
Male	*41,034*	59	56	70	*35,670*	53	52	56	59	59	60	67	*33,405*	52	49	51	54	54	58	61	*29,301*	55	56	55	57	63	67

> scores in vocabulary. Grade 11 Hispanic students scored highest in written expression and lowest in reading comprehension. Black students' highest scores were in science at grade 4 and in language and written expression at grades 8 and 11 respectively. Black students' lowest scores were in vocabulary at grades 4 and 8 and in math at grade 11. Native American and white students alike obtained their highest scores in science at all three grade levels. Native Americans obtained their lowest scores in vocabulary and reading comprehension at grades 4 and 8 and their lowest score in mathematics at grade 11. White students obtained their lowest scores in reading comprehension at grade 4, in vocabulary and reading comprehension at grade 8, and in mathematics at grade 11. Female students obtained their highest scores in science at grade 4 and in language and written expression at grades 8 and 11. Lowest scores for females were in vocabulary at grades 4 and 8 and in mathematics at grade 11. Male students achieved their highest scores in science and their lowest scores in reading comprehension at grades 4 and 8 and in reading comprehension and written expression at grade 11.[8]

Virginia's SAT verbal scores have remained stable over the last 13 years, while math scores have improved. Virginia educators can be proud that the 1988 state average on the verbal scores was higher than the national average. The state has consistently scored lower than the national average on math, but the gap has closed significantly.

Mean SAT Scores[9]

		1975	1980	1985	1988
Virginia					
	Verbal	431	423	435	430
	Math	463	460	473	472
US					
	Verbal	458	449	457	428
	Math	495	492	499	476

Educators are increasingly more aware of the negative effects of grade retention. Students who have repeated one or more grades are placed in the at-risk category, so some teachers are rethinking the value of retention. Regardless, it is prudent to look at the statistics of promotion to determine if students are learning and if large numbers of students are at risk of dropping out of school. During 1986 and 1987, Virginia promoted 92.9% of the membership. The following year saw improvement as 93.5% were promoted. Areas with the lowest promotion rates in 1988 were: Portsmouth - 85.2%; Norfolk - 80.2%; and Westmoreland - 83.9%. Highest promotion rates were in Falls Church - 99.0%; and Fluvanna - 99.1%.

Virginia's average dropout percentage (grades 8-12) for 1988 was 4.7. Dropout rates varied from 1.0% in Bland County; 1.6% in Surry County; 0.4% in Falls Church; 1.4% in Manassas Park; and 0% in Lexington (53 students); to high rates of 10.6% in Richmond City;

10.3% in Petersburg; 10.6% in Warren; and 11.1% in Colonial Beach. Last year, 17,784 teenagers dropped out of school.

The following information provides a look at students who are graduating from Virginia schools.

	86-87	87-88	CHANGE
Public high school graduates, regular and summer	65,677	66,731	+ 1.60%
No. of high school graduates as a percent of 9th grade membership four years earlier	77.35%	75.77%	- 1.58%
No. of high school graduates who continued their education in colleges, business schools, trade or technical schools, nursing schools, and apprenticeship programs	44,478	46,885	+ 5.41%
Percent of graduates continuing education	67.72%	70.25%	+ 2.53%

The total per pupil expenditure in the state for the 87-88 school year averaged $4,069, of which $1,512 was contributed by the state. State contributions for education are based upon a formula [see *Facing Up-23*, p. 44 for calculation of the composite index of local ability to pay] and varied from as little as $399 per student (Fairfax City) to as much as $2,066 per student (Grayson County). Total per pupil expenditures varied from division to division, based in part upon the local governing body's ability and willingness to pay for education. The divisions listed below represent those which spent the most per pupil and those which spent the least. Both groups have very small divisions (Bath and Lexington) and large divisions (Arlington and Virginia Beach).

LOCALITY	EXPENDITURE
ALEXANDRIA	7,117
ARLINGTON	6,987
FAIRFAX CITY	6,914
BATH	5,834
VIRGINIA BEACH	3,189
SMYTH	3,165
WASHINGTON	3,150
PAGE	3,147
POQUOSON	3,135
LEXINGTON	3,122
PITTSYLVANIA	3,107
SOUTH BOSTON	3,061

In 1987, $3.6 billion was spent on public education in Virginia. Four sources provided this income: local (46.9%); state (37.0%); sales tax (10.2%); and federal (5.9%).[10]

Public Higher Education and Other Public Institutions

Virginia supports a diverse higher education system which includes community colleges, one two-year college, four-year colleges and universities. Their diversity is seen in their sizes and the programs developed for the students they serve. The community college system is accredited and functions under the direction of a chancellor. The Commonwealth's Council of Higher Education oversees the four-year colleges and universities.

Four-year Colleges & Universities	15
Two-year Colleges	1
Community Colleges (some with several campuses)	23

In addition, there are five schools operated by the U. S. Government in Virginia, five schools operated by the Department of Mental Health and Mental Retardation, and eleven special education programs funded by the Department of Education in state-supported institutions. Hampton University operates the only college laboratory school in Virginia.[11]

Non-Public Education

There are 248 nonpublic elementary and secondary schools in Virginia which are members of the Virginia Council for Private Education. Additional nonpublic schools are not members of this body and, therefore, are not accredited by it. The Commonwealth houses three junior colleges and 32 four-year colleges and universities which are privately controlled.

Private schools may participate in any federal projects conducted in the public schools. Annually, divisions must ask private schools in their geographical area for their intent to participate in Chapter 1, Chapter 2, and Title II projects. These schools may choose to participate in the planning of these projects and share in the resources allocated to the public school divisions. In some localities the private schools participate actively; in other locations they choose not to participate, some not even communicating with the public schools. Guidelines for these federal programs place the responsibility for program coordination and recordkeeping upon the public schools. Many public school educators feel this is a burdensome task, given the small amount of money they receive and the growing paperwork associated with project management.

Home schooling is a growing alternative to public or private education in institutional settings. Virginia has a very liberal policy for home schooling, enacted by the General Assembly and amended in 1986. Parents may choose any one of four alternatives in lieu of school attendance. The first three alternatives allow automatic approval so long as proper notice is filed with the public school superintendent.

Options Available for Home Instruction

1. The teaching parent holds a baccalaureate degree from an accredited institution of higher education. The parent must submit a program of study or curriculum with the notice of intent; however, no evaluation or judgment is required on the part of the superintendent.
2. Meet the qualifications for a teacher prescribed by the Board of Education. The parent must submit a program of study or curriculum with the notice of intent.
3. Enroll the child or children in a correspondence course approved by the Board of Education.
4. Provide a program of study or curriculum which, in the judgment of the division superintendent, includes the Standards of Learning (SOL) objectives adopted by the Board of Education for language arts and mathematics and provide evidence that the parent is able to provide an adequate education for the child. Here there must be a judgment by the division superintendent. [12]

An annual assessment must be made of each child's achievement. Evidence that the child has attained a composite score above the 40th percentile on a battery of achievement tests must be presented annually to the superintendent of schools. The Department of Education will supply and score appropriate levels of the Iowa tests so that there is no cost to parents. However parents may choose to use another test and employ an independent test examiner.

As of September 1988, there were 2,126 students in Virginia being taught at home. Public school educators are not overly concerned by this phenomena. Some parents who home school are associated with organizations of like parents.

Discussion. In recent years, the Virginia Board of Education has spoken openly about the disparity in the Commonwealth's educational system. Educational demographics do confirm that there are great differences in this state, not only on the amount of money spent for education but in the outcomes as measured on standardized tests. An attempt to equalize the funding formula for Virginia localities may help, but it is too soon to know whether this formula will close the gap on disparities. The mandated teacher salary increases have raised the average salaries across the state but Virginia's average remains below the national average.

The change in the state's funding formula has had differing results throughout the state. While some divisions have benefitted greatly from the change, and have been able to fund teacher salary increases more easily, other divisions have felt the loss dramatically. These divisions have found their local governing bodies putting all of the financial resources toward salary increases with little money for capital projects, equipment, or new programs.

Test scores in Virginia remain above the national average. With an emphasis on serving students in the lowest quartile with special programming, scores may be expected to improve. However the real challenge for Virginians is to help local school divisions, such as Charles City and others, whose scores are consistently low and significantly different from the statewide averages.

While the Commonwealth can be proud of the number of students continuing their education beyond high school, attention must be given to the dropout rate in some localities. Virginia's statistics are far better than those in many urban areas in the nation, but dropout prevention efforts are needed to curb the dropout rate in areas such as Richmond City and Colonial Beach before they grow any higher.

CONTROL AND SUPPORT OF PUBLIC ELEMENTARY AND SECONDARY EDUCATION

Governance Control of Public Education

Ruch's 1985 report to AEL adequately explains the roles and responsibilities of the State Board of Education, State Superintendent of Public Instruction, and the Secretary of Education, as well as local Boards of Education and the Department of Education. The Department of Education is composed of two primary divisions: Compliance and Field Services; and Curriculum, Instruction and Personnel Services.

STANDARDS OF QUALITY

Chapter 13.2 of Title 22.1 of the Code of Virginia consists of the Commonwealth's Standards of Quality for Public Schools in Virginia. The Goals of Public Education as stated in the SOQ are to aid each pupil to the full extent of his or her abilities to:

1. Develop competence in the basic learning skills;
2. Develop the intellectual skills of rational thought and creativity;
3. Acquire knowledge and process skills of science and technology;
4. Acquire broad knowledge and understanding of the humanities;
5. Progress on the basis of achievement;
6. Graduate from high school and qualify for further education and/or employment;
7. Develop personal standards of ethical behavior and moral choice;
8. Participate in society as a responsible family member and citizen;
9. Develop a positive and realistic concept of self and others;
10. Acquire an appreciation for and a sensitivity to people of various races;
11. Practice sound habits of personal health and physical fitness;
12. Enhance the quality of the environment;
13. Develop skills, knowledge, and attitudes regarding the arts;
14. Acquire a basic understanding and appreciation of democracy and the free enterprise system.[13]

SOQ are divided into standards which must be met by each school division. Enacted upon by the legislature, the standards are law and the Department of Education assists in monitoring the execution of these standards. Regrettably, the General Assembly has never fully funded the Standards of Quality, so each locality must provide the monies needed to implement legislated programs.

Following are the seven standards. A brief discussion of each standard will be given, including recent changes in each section.

1. Basic skills, selected programs, and instructional personnel. This section speaks to the general goals of education in Virginia. Since the early 80's, the DOE has diligently pursued the development of Standards of Learning Objectives and Assessment Procedures in each of the subject areas, K-12. When first written, school divisions believed that these objectives would serve as a [minimal] state curriculum in Virginia. The SOQ do not require school divisions to use the SOL's. Divisions may use them or other objectives specifically designed for their school divisions.

   This section speaks strongly to the implementation of remedial education for students in K-12 who score in the bottom national quartile on Virginia State Assessment Program Tests and for those who fail Virginia's Literacy Passport Tests. Students must receive remediation in addition to the regular school program and this remediation may include summer school. SOQ provides state funds to help with the cost of summer school programs and requires the employment of "certain full-time instructional positions for each 1,000 students estimated to score in the bottom quartile on Virginia's tests."

   Section 1 also calls for special education, gifted, and vocational education personnel as set forth in the appropriations act. Class size maximums are specifically stated, the most recent addition being a restriction that limits class sizes in English classes in grades 6 - 12 to 24 students.

2. Support services. This section calls for adequate support services, including pupil personnel services and staff development.

3. Accreditation, other standards and evaluation. This section speaks to two new efforts. First, SOQ call for the Superintendent of Public Instruction to annually identify to the State Board those schools that exceed or do not meet approved criteria of effectiveness. A program of one-time grants shall be established by the Board to assist local school boards in the implementation of corrective action plans for those schools that are

designated as not meeting the approved criteria. This program recognizes individual schools, not school divisions. The program begins in 1990-91.

Second, these standards require the Board of Education to prescribe and provide literacy tests in reading, writing and mathematics which shall be administered to students in grade six and to students who have not successfully passed them in grades seven and eight.

4. Literacy Passports, diplomas and certificates. The Literacy Passport Test is new to Virginia. Replacing the Minimum Competency Test required for graduation and given in grades 10, 11, and 12, this test is administered to sixth graders and must be passed before being admitted to ninth grade. Students exempt from this requirement include those identified as handicapped who are progressing according to their individualized education programs. These standards do not state what is to happen to eighth graders who do not pass one or more of the literacy tests other than the fact that they can't be promoted to ninth grade. However accreditation standards do call for alternative programs.

5. Training and professional development. Professional development for State Board and local school board members is required. Each local board shall provide a program of professional development for teachers and administrators, including a program for administrative personnel designed to increase proficiency in instructional leadership and management.

6. Planning and public involvement. SOQ requires public involvement in the design of biennial school plans and division-wide six-year improvement plans developed biennially.

7. Policy manual. Included is a policy manual requirement for guidelines to encourage parents to provide instructional assistance to their children in the home, which may include voluntary training for the parents of children in grades K-3.

STANDARDS FOR ACCREDITING PUBLIC SCHOOLS IN VIRGINIA

Virginia's Accreditation Standards must be met by each school and are monitored annually by report and during administrative review visits. The current standards were amended by the Board of Education in 1988. Those standards which are new or present some challenge to educators are discussed below.[14]

1 - One of the purposes of accreditation is to assist in determining the effectiveness of schools. As stated in SOQ, in 1990-91 schools which meet certain criteria will be identified as effective and those which do meet the criteria will be required to submit corrective action plans. The criteria is not stated in accreditation standards. This requirement has caused some anxiety among public school educators, especially as to the response by the public when a school is identified as below standards.

2 - The program of instruction in high schools shall include access to at least two Advanced Placement courses or two college level courses for credit. Small schools without close access to universities may find this requirement difficult. However, the state is providing courses via satellite which include some AP courses.

3 - By graduation, each student shall receive instruction designed to help him or her achieve computer literacy. While these objectives are minimal, the skill needed for students entering today's job market and the expectations of universities both require computer experience. Most schools do not have adequate computers to provide students with more than introductory skills.

4 - Each school shall implement family life education consistent with the guidelines developed by the Board of Education. School divisions have spent the last year wrestling with family life education. Most are implementing their programs at this time. Many community groups are still concerned about family life education being taught at all and one of Virginia's candidates for governor is pledging to repeal the mandate to teach family life.

5 - At least 40 per cent of the time of the principal shall be devoted to supervision of instruction and curriculum development. Difficult to document, many principals are unsure of exactly what can be used to fulfill this regulation. In addition, a requirement to analyze test scores and develop plans to improve them assumes principals have the testing background to develop these strategies. These and other criteria for accreditation which focus on instructional

leadership remind all educators of the importance for leadership development training and on-going staff development for principals.

6 - Dropout prevention programs are required by accreditation, including providing alternative programs, appropriate counseling services for students, and establishing close contact with parents of potential dropouts. While some money for dropout prevention programs has been available to a limited number of divisions, there has been little assistance for these efforts from the state.

7 - An evaluation of each teacher must be completed at least every two years. This requirement has forced some school divisions to revise their evaluation models, as many divisions were implementing evaluation models which required full evaluations of teachers every three years or sometimes more.

8 - An elementary guidance program is required for every elementary school. Accreditation standards speak to the amount of time a counselor must be assigned at the elementary level. This new requirement has posed financial problems for some divisions. In addition, Virginia does not have an adequate supply of elementary counselors to fill the positions available. It is expected that waivers will be issued to allow teachers to work on the counseling endorsement in much the same way that special education allowances were made. Universities offering training for counselors are concerned about this situation, and worry that people who develop new elementary guidance programs without training may not present the best programs possible. In addition to the requirement for elementary guidance, accreditation standards now require all counselors, K-12, to devote 60% of their time to the counseling of students as opposed to paperwork activities, group guidance or other traditional guidance functions.

9 - Alternative education programs receive new emphasis in the accreditation standards, as school divisions must prepare to offer these programs to students who do not pass the Literacy Passport Tests by the end of eighth grade. The alternative programs must lead to one or more of the following: a) passing the literacy tests; b) high school graduation; c) GED certificates; d) certificate of program completion; or e) job-entry skills. Small school divisions will especially need assistance with the development of these programs. Fortunately, they will not need to be in place until the 1992-93 year.

10 - Graduation requirements in Virginia provide students with three diploma options. Minimum requirements for a 21-credit diploma include two years each of math and science plus one additional year of either math or science, and one year of fine arts or practical arts. Other subject requirements are unchanged from previous years. Students who graduate with an average grade of "B" or better will receive a Board of Education Seal on the diploma. A third option is the Governor's Seal diploma. Twenty-three units are required for graduation, including at least one AP course, three years of math, three years of science and three years of foreign language. Students who elect this prestigious diploma have four (instead of six) electives during their four years of high school. Some schools have seen more students than originally projected seeking the Governor's Seal diploma. Consequently, the Governor's Seal diploma has impacted upon the enrollment in courses in the arts and vocational education which are electives. Many high schools in Virginia have reorganized their school day so that they offer seven periods of instruction, allowing students the time needed to enroll in elective courses. The seven period day also allows for study halls, something not all schools want to offer, but a good time for schools to schedule remedial education opportunities.

NOTE FOR CLARIFICATION: ADMINISTRATIVE REVIEW PROCESS

Reference has been made to the administrative review process in Virginia. For further clarification, this procedure provided the Department of Education with feedback as to whether local divisions were in compliance with state and federal mandates. Each school division has been visited every five years for a review of records and procedures. This review was non-qualitative; the Department was only interested in compliance, not quality of programming. The administrative review, unlike school evaluations, has not been viewed by the divisions as a visit which helped them improve their programs. Rather, the time required for preparing for the review [time preparing documents and pulling information together] has been seen as time taken away from instructional efforts. Beginning with the 1989 school year, the administrative review has been rescinded. It is the understanding of local administrators that federal programs, such as special education, Chapter 1, school food service, and vocational education, will continue to be reviewed, perhaps more frequently than before. But SOQ and accreditation requirements will only be monitored through written reports.

THE 1988 REPORT OF THE VIRGINIA BOARD OF EDUCATION

In its 1988 report (previously cited as *Becoming a Leader in Education*) to the governor, General Assembly and citizens, the Virginia Board of Education listed a number of priorities for meeting the challenge they have set, to have Virginia recognized as one of the top educational systems in the country. A brief discussion of these priorities will be provided. School divisions in Virginia are well aware of these priorities, as the State Board has directed the Department of Education to emphasis these areas and programs.

DISPARITY The Board expressed its concern about the differences among the 138 local divisions in the state. It referred to the new funding formula which increases state dollars to the economically depressed communities while not reducing funding for the more well-to-do areas of the state.

Preschool Programs

Eight pilots of programs for at-risk four-year-olds have been conducted in Virginia and were believed to be successful. The General Assembly established a joint subcommittee to study the issue of schooling four-year-olds. During the 1989 session of the legislature, the General Assembly created the *Virginia Council on Child Day Care and Early Childhood Programs.*

Minority Student Performance

Special college preparation programs are now required of local divisions to motivate disadvantaged and minority students to attend college. Project Discovery, a $1.37 million dollar project of the General Assembly, helped low-income and minority students prepare for college.

Special Education

An external evaluation of Virginia's special education program was conducted and reported on during the 1987-88 school year. The report included 52 recommendations for improvement, many of which were implemented the following year. Parent Resource Centers have been established at 15 sites with the goal of similar centers for all localities by 1991.

Family Life Education

This program will be in place in every division by 1989-90 school year. Local school boards have the option of using the program adopted by the state or drafting their own within certain guidelines.

Literacy Literacy is a concern of Virginia's political leaders and several programs are underway to support this cause.

Literacy Testing

Literacy Passport Tests will be required for the 1990-91 class of sixth graders.

Remedial Instruction

All local schools divisions are required to have programs in place for those students who score in the bottom fourth of national standardized tests. "The Board has put special emphasis on providing summer school remedial programs. It is hoped that students can use the summer months to bring their achievement up to grade level."

Class Size

Subject to funding, the Board plans to require student-teacher ratios of 24 to 1 in the first grade and in English classes during 1989-90. Their goal is to reduce these ratios to 18 to 1 by the year 2000.

Historical Documents

The DOE has established objectives (SOL) in grades five, seven, eight, eleven and twelve for the teaching of special historical documents: the Declaration of Independence, the Virginia Statute of Religious Freedom, and the United States Constitution.

Teacher Education

The Board believes that having the very best public school teachers will help found public schools which are among the best in the nation.

Teacher Education

The Board of Education and the State Council of Higher Education have approved 35 plans for restructuring teacher education. Each fo the new programs require undergraduate degrees in arts and sciences for all prospective teachers, and limited professional education courses to 18 semester hours. These new programs include new kinds of four-year, four-and-one-half-year, and five-year programs to prepare teachers. The restructured plans are effective June 30, 1990.

Teacher Salary, Recruitment, and Retention

A new state law requires that teacher salaries be reviewed every two years to determine if the pay matches other occupations requiring similar education. The Board is interested in reestablishing Future Teachers of America Clubs in high schools and colleges.

Forgivable Loan Program

Virginia provides $600,000 for a student loan program through the Department of Education. Students interested in obtaining credentials in subject areas in which there are shortages can receive up to $2,000.

Recertification and Continuing Education

The DOE has developed a point-based recertification system which allows teachers more flexibility in designing their own professional improvement. Each teacher will be required to have an individual plan for recertification. Teachers with master's degrees will not be required to take college courses as in the past. The Board is looking at other incentives to encourage more teachers to acquire the master's degree.

Educational Leadership The Board is committed to leadership training for principals, other administrators, superintendents, and school board members. "All educational leaders--the Virginia Board of Education, government officials, parents, community leaders, business representatives, and others--must work as partners to set the educational agenda."

Principal Leadership and Education

Principal assessment centers are located at four sites in Virginia. These centers test the skills of acting or potential principals through a week-long program. School divisions select these participants and pay for the experience. In addition, DOE collaborated with a number of state education organizations to establish the Virginia Center for Educational Leadership (VCEL). This center, housed in the Department, conducts training and offers conferences and workshops to improve administrative skills and knowledge of instructional issues.

The DOE, the State Council of Higher Education, and the Board of Education have called for the restructure of education leadership training. Colleges and universities are currently redesigning their programs to fit the guidelines proposed by these groups.

School Board and Superintendent Training

The Virginia School Boards Association has established the School Board Academy to help meet the requirement that all superintendents and school board members participate in training.

Technology Technology is viewed as one way to provide programs for students with vast differences in achievement and in educational opportunities.

Educational Technology Plan

The DOE has a technology plan which includes expansion of the electronic classroom which now broadcasts advanced English, calculus, and Latin. By July 1990, Virginia plans to enlarge services with satellite downlink equipment in each secondary school. Approximately $5 million has been included in the 88-90 budget to get the electronic classrooms on line.

Computer Education and Communications

Funds were included in the current budget to purchase additional hardware and software for sixth grade students. During the spring of 1989, computers were purchased for each sixth grade classroom in the state [many designed computer labs] and money was distributed for software. Regional computer workshops were held to train a limited number of teachers from each division. During the 89-90 year, divisions will conduct computer training for middle school teachers and receive funds for additional software.

The Department operates a bulletin board service for telecommunications among school divisions and the DOE. Superintendents and special education coordinators have mailboxes for division utilization. During 1989, an attempt was made to issue DOE memos via the network, but by late spring this effort was abandoned.

Technology Financing Program

The state established an equipment financing program through the Virginia Public School Authority. Previously, VPSA funds were reserved for construction.

Middle Schools

The Board is committed to restructuring the middle grades, with special attention given to the dropout problem.

Middle School Restructuring

The Board approved a plan for restructuring all sixth, seventh, and eighth grade programs, regardless of the organizational arrangement of a division. The Board's plan requires schools to use exemplary practices, curriculum, and organizational arrangements to improve the education of early adolescents. Four model middle schools have been recognized and many more "Vanguard" middle schools. Vanguard schools are those in Virginia which espouse and demonstrate the criteria around which the restructuring effort is designed.

Dropouts

The Board revised the accreditation standards and the General Assembly acted upon new Standards of Quality, both of which speak to dropout prevention efforts by the divisions. Schools must provide alternative education programs which emphasize basic skills, interview students who are dropping out, keep records of dropouts, and design other efforts to reduce the number of dropouts.

Accountability

The Board of Education has planned major actions to enhance accountability in public schools across the Commonwealth.

Student Progress

The Board and DOE revised the state testing program with the adoption of the tests provided by Riverside Publishing Company. These tests are expected to give a more accurate picture of how Virginia's students are doing than the previous SRA tests.

Educational Performance

The Board is discussing the Virginia Educational Performance Recognition Program as proposed by the Superintendent for Public Instruction and plans to implement a program by 90-91. The purpose of this program is to improve the learning of students through (1) measuring performance; (2) identifying effective programs; (3) helping successful practices spread throughout the state; and (4) providing recognition and rewards. (This is the same program referred to in the SOQ -- effective schools.)

STRATEGIC PLAN OF THE VIRGINIA BOARD OF EDUCATION, 1988 - 1994

The most recent document published by the Board of Education which speaks to priorities is their strategic plan for the period of 1988 - 1994. This plan can be found in Appendix A. While arranged differently than their last report discussed above, the goals are the same as before (also the same as those in SOQ) and the "seven broad educational issues facing Virginia" are the same. The discussion below will focus only on amendments or added information not contained in the 1988 report. The summary statements are quoted verbatim from the plan.[15]

Disparity

Summary: Virginia must reduce the educational performance gap among school-age children and school divisions in the quality and scope of educational programs.

Two objectives were added which speak to increasing support for programs for the gifted, specifically regional non-residential special schools and residential schools for gifted students.

The Board established an objective which states that the DOE will determine the advisability of establishing magnet schools for low-achieving students.

Objectives were presented which indicated that Virginia schools will provide voluntary developmental preschool programs for four-year-olds, and that the state will ensure greater cooperation among those agencies concerned with special education students.

The Board indicated that it will monitor the 1988 funding formula to determine funding disparities.

Other objectives confirmed support for minority education projects and Family Life Education.

Illiteracy

Summary: Virginia must eliminate illiteracy throughout Virginia's school divisions.

The Board directed the DOE to assess the needs of student who speak English as a second language.

Support was confirmed for remedial education and small class sizes in English and first grade.

Teacher Education

Summary: Virginia must build one of the nation's best school systems by continuing to attract teachers of the highest caliber.

The Board indicated interest in providing incentives to school divisions to help them develop ways to recruit and keep effective teachers.

Objectives spoke to support for the new undergraduate teacher education programs and individual recertification plans. The feasibility of all teachers having graduate degrees will be studied.

The Board renewed its commitment to competitive teacher salaries.

Educational Leadership

Summary: Virginia must promote student achievement by creating effective partnerships among teachers, their principals, the students' parents, and community leaders.

In addition to the training efforts addressed in the previous report, the Board stated that school divisions will evaluate and compensate principals on the basis of performance. More emphasis will be placed on leadership in the training of principals.

International education will be implemented in the curriculum, K-12. Additionally, joint ventures between the Department of Economic Development and the Board will be established so that the Board can be more responsive to the needs of business coming into the state. In order to maximize the use of business and industry in vocational education, innovative ways to expand cooperative work experiences will be explored.

Less effective Department of Education programs will be assessed and "sunset provisions" will be established for them.

Technology

Summary: Virginia must make educational technology available to everyone in public school education.

The Department will develop a five-year plan for technology and each school division should include technology in its six-year plan.

Electronic classrooms will be available to all schools.

After the completion of the initiative to place computers in the middle grades, the program will be expanded to elementary and secondary schools.

Middle Schools **Summary: Virginia must convert one of its major problems into an asset.**

All middle school grades shall be restructured by June 30, 1996.

Middle schools will provide assistance to potential dropouts. The state will set a goal that no school division will have a dropout rate higher than the present statewide average, and that the present statewide average will be reduced by one-half.

Accountability **Summary: Virginia must hold the state and local school divisions accountable for educational standards, instruction, and student achievement.**

Support is given for determining effective schools and providing funds for that program.

DOE will provide quantifiable assessments in administrative review, accreditation, and vocational and special education.

The following three objectives, quoted verbatim, open the door for potentially the greatest changes in the Commonwealth's system of education:

The Board of Education will make recommendations to the Governor and General Assembly which redefine the duties and responsibilities of the Board of Education, the Superintendent of Public Instruction, and local school boards, superintendents, and principals.

The Board of Education will propose a resolution to the General Assembly to revise the statute establishing criteria by which the Board of Education may consolidate school divisions that fail to meet the Standards of Quality.

The present continuing contract law relating to school teachers and administrators will be reviewed by the General Assembly.

Support of Public Education

The state supports public education with basic aid and categorical funding. Virginia funds the public schools, theoretically, with a 50-50 split between the state and local governments. Each locality's contribution is computed using a composite index of local ability-to-pay. Local contributions range significantly, the lowest composite being .2499 in Lee County.[16] Of course localities may go beyond their contribution as computed with the formula to provide necessary programs or salary increases. A copy of the composite index is included in Appendix B.

Local school divisions and educational lobbies, such as the Virginia Education Association, have never believed that the General Assembly is funding education at a satisfactory level. The Standards of Quality have never been fully funded. And local school administrators become frustrated when the state's Joint Audit and Legislative Review Commission indicates that the funding formula includes mandated positions in the funding formula. When new positions are required by SOQ, and administrators ask where the money is for the positions, they hear that the positions are accounted for in the basic aid. Without categorical funding for so many requirements, it is difficult to determine how a division's state monies were developed. When new programs are mandated, such as elementary guidance, local schools "feel" as if they are having to bear the total cost for the program, whether in fact they are or not. The salary mandates of the last few years have encouraged that feeling. Local divisions which did not receive 10% of new funding from the state but were required to give 10% raises (and accompanying fringes), became discouraged about state mandates. In previous years the legislature wanted to see all divisions consistently raise salaries but divisions behaved differently. The most recent salary mandate carried punitive action to those who didn't comply by withholding state funds. This sanction provided the incentive needed for most local governments to comply with the salary mandate.

New Education Policies Reported in 1985

In Ruch's report to AEL in 1985, several policies were being developed or being discussed which merited examination. Since that time, the development of these initiatives has warranted additional attention.

The new accreditation standards have been discussed in this section. Ruch suggested that "the new accreditation standards [graduation requirements] are narrowing students choices, limiting opportunities, and will have a profound effect on what happens to vocational education." Ruch was correct on all three accounts, but many schools added a seventh period to provide students with more opportunities for elective subjects. It has been the change in these graduation requirements accompanied with declining enrollments in some localities which have impacted on programs such as vocational education.

In his discussion of the Standards of Learning, Ruch indicated that the criterion referenced assessment program being developed to evaluate SOL objectives would be required. The assessment materials are available to schools, but no division is required to use any of the SOL materials. Divisions may use their own criterion reference tests, including those produced by textbook publishers, as long as the SOL objectives are correlated to them.

Another initiative cited in the 1985 report was the merit pay and career ladder plans for teachers. While a few divisions received pilot monies to develop and operate these programs, and while many at the state level expressed interest if not commitment to these programs, the merit pay and career ladder plans came to an abrupt halt. Some divisions, such as Fairfax County, have implemented plans, but the state is no longer calling for this on a massive scale. Rather, the Board of Education is now calling for merit pay for administrators.

The fourth initiative cited in the 1985 plan was the new standard for preparation of licensing of teachers. This will be discussed in the next section.

Discussion. Over the last decade, the state has taken a more aggressive position with local divisions in directing the course of education in the state. Divisions have witnessed a change in the function of the Department of Education. Once an agency which was seen as the major provider of technical assistance to divisions, the DOE is now viewed as the manager of compliance issues. Not only has the administrative review been articulated as a major function of this agency, but the Department is the receiver of hundreds of reports submitted by the divisions annually.

This section provides the reader with the substantive issues being addressed in Virginia. These concerns are pronounced by the Board of Education, the Governor or his staff, and are directed by the Department of Education. The divisions must carry out specific plans to meet these goals for education, sometimes with specific guidelines from the Department and sometimes with very liberal parameters.

While the Goals of Public Education are the organizer around which the DOE functions, both the Department and the divisions do not limit their programming to specific activities suggested by the Board. For example, while the State Board implemented the remedial education requirement to help serve students at-risk, divisions and the DOE are looking at other strategies for helping these students. Another example can be found in the approach to gifted education. The state plans to increase the number of special schools for gifted students. Local divisions are taking a more holistic approach, by serving the gifted in existing or new programs within their divisions, enlarging the gifted students' curriculum but allowing them to interact with students in all ability and interest groups.

In order to better understand the variety of topics addressed in any one year by the DOE, the following list is provided. The General and Vocational Education staff of the Department developed these priorities for their work in the 89-90 school year. The relationship of some of these topics to state goals is evident. One can also see extensions of goals into a variety of areas. [It should be noted that the divisions of compensatory education, leadership development, professional development, teacher education, and technology are not located under general education in the DOE.]

PRIORITIES FOR QUALITY EDUCATION

1. "At Risk" Population
    - a. Drop Outs
    - b. Pregnancy/Child Care/Marriage
    - c. Failure/Low Grades
    - d. Dislike School
    - e. Attendance
    - f. Delinquency
    - g. Child Abuse
    - h. Substance Abuse
    - i. Violence
    - j. Poverty
    - k. Homelessness
    - l. Language Minority Students
2. Equitable Funding
    - a. Disparity in Educational Opportunities
    - b. Public Support and Involvement in Education
3. Technical Assistance
    - a. On-site Technical Assistance/Consultation
    - b. Primary Focus on Instruction
    - c. Focus on Teaching Techniques and Principles that Reinforce Instruction
    - d. Realistic Expectations in Evaluating Student Achievement
    - e. Parent Involvement
4. Progressive Programming
    - a. Help Students Attain Skills to Succeed
    - b. Educate the Total Child
    - c. Business and Industry Involvement in Program Development
    - d. Preparing for the Global Economy/Job Market
    - e. Decision Making Skills
    - f. Creative Problem Solving
    - g. Various Applications of Technology
    - h. Job Entry Skills
5. Continuous Personnel Development Activities
    - a. Efficient Use of Competent Personnel
    - b. Training in Leadership, Management, Microcomputing and use of Other Technology
    - c. Developing Ethical Standards
    - d. Basic Life-Management Skills
    - e. Personnel Training in Techniques for Inservice Activities to Teach Basic and Critical Thinking Skills.
    - f. Professional Development Activities Relative to Priorities for Quality Education

Exerted from a memo by Dr. Callie P. Shingleton, Assistant Superintendent for General and Vocational Education, to the General and Vocational Education Staff, Dated July 24, 1989.

THE ROLE OF HIGHER EDUCATION IN ELEMENTARY/SECONDARY EDUCATION

The role of higher education in Virginia has not changed significantly since the 1985 report. Therefore it would be redundant to discuss the relationship between higher ed and local divisions. There are several specific programmatic changes and initiatives which impact upon this relationship.

Co-enrollment in Courses. The state of Virginia continues to allow students to enroll in college courses during their high school experience and receive credit from both institutions for these courses. This has usually been done to accommodate gifted students who were ready to enroll in college courses and who did not have advanced courses available to them. The state now encourages such enrollment in two ways. First, accreditation standards clearly state that each secondary school shall offer options for students to pursue a program of studies in several academic areas, including access to at least two Advanced Placement courses or two college level courses for credit. This means that enjoying the resources of nearby colleges and universities is more than an option for local high schools. If a division does not offer AP courses, it must provide ways for students to access college courses. [The utilization of school-based satellite receivers for electronic classroom courses will provide additional opportunities for advanced courses.] Some students are attending a calculus course at a university, and others are taking computer-assisted design at a community college. Whatever the course of study, the state is endorsing the coordination of secondary and college courses for secondary students.

Secondly, community colleges are offering their teaching resources to come into public schools and teach college level courses on-site. Students who take these courses receive college credit from the community college as well as from the high school.

It is not clear from these program descriptions whether local divisions must pay all of the costs for these options. For example, in the past, schools could say to students that they would cooperate with their interest in attending a university class, but that the division would not pay the tuition. Now if a student needs a college class to fulfill a requirement which cannot be met otherwise, it is unclear whether the division should pay all of the costs.

Assistance for Beginning Teachers. Virginia's Beginning Teacher Assistance Program (BTAP) has become institutionalized since the 1985 report. In the fall and spring of each year, trained observers visit Virginia's non-certificated teachers to examine their teaching. During these announced visits, the observers indicate whether they see specific behaviors deemed as characteristic of effective teaching. Beginning teachers who demonstrate a certain percentage of these behaviors after three visits can receive their teaching certificates. Others receive assistance in the form of workshops to prepare them for additional observations during the second semester of their teaching. Virginia educators are pleased that a high percentage of the beginning teachers successfully complete the BTAP program during their first year of teaching. There are nine BTAP regions in the Commonwealth.

School divisions cooperate with the Department of Education in the administration of BTAP. While school personnel are not directly involved with the program, their support and cooperation is necessary for successful implementation of this assistance model. There is, however, still some concern that BTAP focuses more on assessment than assistance. Other models for assisting first year teachers, such as Virginia Tech's mentoring program for new teachers, hold great promise and are very appealing to local divisions. Local divisions have felt left-out of the BTAP certification process. BTAP results do not impact upon the local division's prerogative to rehire or dismiss a teacher.

Restructuring of Preservice Programs. As cited earlier in this report, the State Board of Education is very proud of the fact that it required Virginia's colleges to restructure their teacher preparation programs. These new programs go into effect beginning with the 1990-91 academic year. Students who want to become teachers will no longer have the option of an education degree but will have a degree in one of the liberal arts or sciences. A maximum of 18 semester hours of education courses will be allowed. Teacher educators were particularly concerned about the organization of this new program with students interested in teaching elementary education. First, it was difficult to determine what the major area of study should be for a prospective elementary teacher. Secondly, it seemed impossible to include all of the courses needed to prepare a teacher for the elementary program, especially reading, in the limited 18 hours. It will be interesting to see how these teachers, prepared under these new programs, perform in the classrooms and how they fare with BTAP. As mentioned earlier, various universities have adopted models which increase the college experience to as long as five years. It will also be interesting to watch the enrollment in the teacher education programs in universities which require longer than the traditional four years. Staff developers in local divisions anticipate that teachers prepared under these new programs will need increased and different inservice and support during their first years of teaching than previously prepared first year teachers.

Certification of Elementary Counselors. Virginia's accreditation standards require elementary counseling services beginning with the current school year. Never before have elementary schools been required to have counselors, although some schools in Virginia have had elementary counselors since the 70's. While there is still some confusion over the requirement for "counselors" -- some superintendents have apparently received waivers or permission to offer a counseling program without counselors -- most divisions have employed elementary counselors for the 89-90 school year. Projections of counselor positions available and certified teachers with counselor endorsements indicated a discrepancy. There are many more positions available than people to fill them. As has been the case with special education positions, it is expected that the DOE will grant waivers to divisions for teachers who are working on the endorsement in counseling. This means that some people employed as elementary counselors may have as few as six hours in guidance and counseling. Administrators of university counseling programs have expressed great concern about this situation. They are concerned about delivering an effective counseling program with an internship if teachers are practicing counseling before learning about it.

Telecommunications. Virginia's plan for technology is providing all school divisions with satellite dishes for telecommunications downlinks. School divisions will be able to more easily access electronic classrooms which are now limited by the access time of instructional television stations. In addition, the dishes potentially provide divisions with many more opportunities for staff development through teleconferencing and distance learning from universities. The hardware has proceeded the program planning at both the division and university levels. While no one can fault the DOE for initiating the purchases of receivers, some universities are unsure where they are headed with this technology. Over the next few years, Virginia's colleges and universities will have to come to terms with off-campus programs delivered by satellite as well as distance learning options for inservice education. Public school educators are familiar with teleconferencing since the DOE conducts teleconferences on a regular basis via public television stations. Universities, especially those who depend on graduate classes for teachers as a major source of income, must continue the discussions of current technology and the impact on graduate classes. School divisions are expecting to use the satellite receivers on a regular basis for staff development opportunities. Educational agencies, such as AEL, will also want to consider the utilization of satellite broadcasting to maximize audiences for appropriate programming. The satellite dish is not the answer to all delivery problems in teacher inservice, but it is a new option and one untested on a large scale. The Center for Innovative Technology at James Madison University is a resource for universities and educational agencies in Virginia.

Restructuring Principal Preparation Programs. Just as the Virginia Board of Education required colleges to restructure teacher preparation programs, the Board is now requiring institutions of higher education which offer administrative certification programs to redesign them. The Governor's Commission on Excellence in Education first noted the importance of the building principal and called for more attention to educational leadership. The Commission's recommendation spoke to performance and the need for an assessment program for principals and potential principals. The Board of Education appointed the *Ad Hoc* Committee on Teacher Education which consists of three members of the Board of Education and two members of the State Council of Higher Education. On August 19, 1988, the Committee on Restructuring Principal Preparation Programs, consisting of representatives of 14 institutions of higher education, state associations, Teacher Education Advisory Board, NASSP Assessment Center Directors and DOE staff held the first in a series of meetings to develop and recommend to the *ad hoc* committee the guidelines for drafting proposals to restructure programs. Proposals are to be submitted by December 15, 1989, with implementation of the new program by July 1990.

Certification of a prospective school principal may only occur if the applicant has completed an approved principal preparation program. A master's degree will be required for certification as a principal, but is not a necessary component of the approved program. Interesting features of the guidelines for restructuring which were not present in previous programs include: (1) a full-time internship, minimum of 90 days; (2) plans for the recruitment and retention of women and minority students; and (3) a formal assessment of the candidate's ability to demonstrate skills associated with effective school leadership.[17]

Universities are not being provided with a great deal of planning time for this change. The three features cited above all require different thinking in the certification process. In addition, administrative salaries in the state have not increased at the same rate teacher salaries have. Teachers no longer look at administrative positions as offering greater incentives than teaching. The results of these restructuring efforts will impact directly upon Virginia's elementary and secondary schools in several ways. First, it will be harder to become endorsed as a principal. Second, a serious attempt to recruit women and minorities may be successful in increasing their participation in administrative roles. Third, the formal assessment of leadership skills may bring a different kind of person into the principalship, or it may discourage other individuals who are "afraid" of assessment. There is no guarantee that assessing leadership will provide better leaders. However, the recognition by the state board that leadership skills are important and that they should be developed and assessed gives new recognition to the importance of the principalship. Universities must determine whether they can provide leadership training using traditional course formats, or whether they must look to training models in business (and perhaps trainers outside of their colleges) for better delivery systems and ones that can stand the assessment test. The Virginia Center for Educational Leadership (VCEL) housed within the Department of Education should serve as a resource to universities during the restructuring effort.

Restructuring of Middle (6 - 8) Education. Another result of the Governor's Commission on Excellence in Education was the recommendation to restructure education in the middle school grades. The DOE has begun this effort.[18] During the 1988-89 year, the state announced several model middle schools in the state and other schools applied for Vanguard status. [Vanguard schools are those which are exceptionally successful in meeting their students' needs.] All of these schools are to be used as resources for divisions as they work through the restructuring effort. Restructuring is based on the research on middle school education, and Virginia's schools must enter into self-study for restructuring if the school houses either sixth, seventh, or eighth grade. This means that some elementary schools, some high schools, junior high schools, and all middle or intermediate schools will experience this self-study and change process.

Currently there are only 149 middle schools in Virginia. There are 749 other schools which house the middle grades. As divisions consider the restructuring process, some are going to reorganize their schools in order to have middle schools. Others will not. But all will need assistance with the restructuring process. Divisions have already begun requesting middle education courses so that teachers and principals can become endorsed in middle education. Others will want courses just to provide baseline information for restructuring. This effort provides higher education with a wide open opportunity to help schools. If colleges and/or professors will show an interest in middle education, provide the courses needed, and market their resources, school divisions can receive the technical assistance they need and universities can increase school division participation in courses. Since the restructuring effort must be research based, incorporating best practices and emerging practices from research, this is an exceptional opportunity for higher education.

Individualized Recertification Point System for Certified Personnel. At the present time, teachers and administrators in the Commonwealth must renew their teaching certificate every five years. Educators have had the option of acquiring six semester hours of college credit or three or more hours of college credit and up to three hours of non-college credit. The non-college credit has been issued by the DOE for an activity created by the division which satisfies certain requirements for length of activity, type of activity, etc. This system for recertification has supported university efforts to enroll teachers in graduate programs. In addition, this system has encouraged relationships between colleges and school divisions as they plan together continuing education courses for teachers, frequently delivered on-site in the division. This system will remain in effect through July 1990.

Beginning next July, Virginia will implement a new Individualized Recertification Point System. This new system is a result of a recommendation from the Governor's Commission on Excellence in Education which called for a revision of recertification standards to require an individualized plan based on a point system. This point system requires each teacher/administrator to acquire 180 points every five years. One semester hour is equal to 30 points, so a teacher can continue to take six semester hours of credit to earn the required points. However, this plan allows teachers to do many other things other than taking courses. Only those teachers who do not hold a master's degree are required to take any coursework. The potential impact on higher ed is clear. Those universities who count on graduate level courses, especially those delivered directly to school divisions, to generate FTE's for funding could lose a large fraction of their population. When teachers begin having other options for staff development and recertification, there is no guarantee that they will continue to enroll in university courses for recertification points.

In the new Virginia Recertification Manual,[19] the recertification process and certificate holder's responsibilities are discussed.

> To complete the requirements for recertification, the certificate holder must plan and annually review a program of professional development activities in consultation with an advisor who has been designated by the certificate holder's employing agency. Each activity in the program must satisfy the criteria for recertification. Before the certificate holder commences the activities, the advisor must certify that the activities satisfy the criteria. When the activity has been completed, the advisor must verify its successful completion by reasonable documentation. During the fifth year of the validity period, the certificate holder and advisor should submit the Individualized Recertification Transcript form to the division superintendent's office.

The purpose of this new system is to allow teachers and administrators to have input into their own staff development. While an advisor must sign-off on the plan, the educator and his/her advisor shall talk together to agree on an appropriate plan of action. The activities agreed upon in the plan must be activities available to the educator. The certificate holder is required to document the accrual of 180 points, based upon activities drawn from a number of options:

College credit
Professional Conferences
Peer Observation
Educational Travel
Curriculum Development
Publication of Article
Publication of Book
Mentorship/Supervision
Educational Project
Local School Division In-service Activity

The plan sets the maximum number of points one may earn in each category. Each category is well-defined in the plan. Teachers have been receptive to this point system since they can earn points for activities which they have been doing, often without recognition.

Teaching a course for a university

Principal's assessment center participation

Supervising student teachers

Service on textbook adoption committee

Visitations in other school divisions

Building-level peer coaching program

Instructional workshops sponsored by consulting groups , such as AEL

Teachers without a master's degree must earn at least 90 points through graduate-level coursework *in the endorsement area.* This requirement poses some problems to teachers who live a far distance from a college and especially those who are endorsed in subject areas which may not be readily available. For example, in far Southwest Virginia, it would be very difficult to develop a course for physics teachers, find a central site, and have the necessary enrollment required to offer the course. Physics teachers are not in great supply, they are physically separated by the geography of the region, and not all of them want a course at the same time. While college administrators brought this to the attention of the State Board during hearings on the new plan for recertification, it is clear that the intent of this requirement is to strengthen a teacher's competency in his/her teaching field. [The Board has also considered requiring all incoming teachers to attain a master's degree in their field.]

Those charged with the responsibility of staff development in the divisions have a great deal of work ahead of them in the coming year. They must plan for this new system and develop a manageable recordkeeping system. Additionally, they must prepare the advisors, who most likely will be principals, for their new role.

The impact of the point system on universities is uncertain. Some staff developers will behave no differently than before. They will see the colleges as the best deliverers of inservice education on current topics. Divisions will continue to offer college courses and support them financially. Other staff developers may look more to teachers to set their own agenda. Still others may use this opportunity to contract division-sponsored non-college courses, using their limited financial resources in different ways. At this time it is impossible to predict the effect of the point system. As this system evolves over the next few years, it will be interesting to watch the relationship between universities and school divisions. Colleges may become more aggressive as they market their programs to schools.

Colleges and universities continue to work directly with school divisions through the DOE's Professional Development Councils, organized by the seven superintendents regions. These councils meet several times a year and are composed of the staff development coordinators from the divisions, higher ed representatives, and DOE professional development supervisors. Together they share programming ideas, announce upcoming events, and coordinate activities. These meetings provide universities with an opportunity to hear about the needs in divisions.

Summer activities conducted by local universities continue to generate enthusiasm from Virginia teachers. Activities funded through Title II, NSF, Virginia Writing Projects, and the like have appeal to certain teachers who prefer to spend concentrated time in study/activity during the summer. These types of projects frequently offer tuition at no charge and/or provide stipends which make them very attractive to teachers.

The relationship between any one university and a school division may change from time to time. Generally, those in divisions working with higher education look for a relationship which is mutually satisfying and flexible. Divisions prefer to have input in the design of courses and the choice of instructors. Colleges want to try new courses and experiment with different formats. Generally a division will work over time with an institution. However as tuition costs escalate, schools are more careful about how they spend their limited funds.

Some staff developers state that they no longer work with an institution simply because it has priced itself out of the market.

Technical assistance to school divisions is most often supplied by higher ed personnel rather than through the institution itself. For example, during the last decade as schools were acquiring computers, individual professors, who had amassed computer knowledge on their own, served as resource people to school divisions. Schools were sometimes ahead of colleges in the purchasing of hardware and software. Divisions depended on certain individuals to come into the schools to train teachers and help with hardware configurations. Of course these individual professors represented their institutions well, but the relationship for technical assistance developed one-on-one rather than through the college or university.

Discussion. Virginia's institutions of higher education are experiencing the effects of the Governor's Commission on Excellence in Education 1986 report just as public schools are. The efforts of the state board together with the State Council on Higher Education to restructure teacher education and principal certification have impacted significantly on colleges of education. Resources are allocated for studying and planning for these changes, and previous models and thinking have been challenged. Over the next ten years, educators and the public will be able to evaluate the worth of the restructuring efforts as the new products take their places in the field. The colleges do need support during this evolution because the restructuring has been thrust upon them rather than coming from within their organizations.

Universities in the Commonwealth have new opportunities to respond to the needs of school divisions. Each time something new is mandated in the schools, whether it be guidance counselors or social workers or the electronic classroom, the colleges of education can respond by adapting programs and devising new offerings for inservice opportunities. With the new point system for recertification offering teachers more than coursework options, colleges must become creative in their formats and themes which continue to attract the teaching population. Now is the time for universities to consider the possibilities of distance learning and establishing their own electronic classroom as schools have the technology to receive inservice in new formats, on-site, without traveling long distances. If colleges are going to remain competitive in the teacher inservice market, they must begin planning with divisions for timely topics using state-of-the-art technology. Some divisions in the state have persons coordinating technology efforts who are well acquainted with the technology and all it has to offer. Other divisions do not have such a person. Again, universities can provide assistance to divisions by offering the help and support of a university person who has this expertise.

TRENDS IN PUBLIC ELEMENTARY/SECONDARY EDUCATION

The Governor of the Commonwealth, the General Assembly, and the Board of Education all speak to one major concern: making Virginia one of the top education states in the nation. No one is really sure where Virginia would rank currently if all factors, economic and programmatic, could be evaluated, but the political leaders of the state want Virginia to rank at the top nationally in its educational program. Since the 1986 report of the Governor's Commission on Excellence in Education, continuous and fairy rapid initiatives have been announced to move Virginia into this category. There is no doubt on the part of educators in this state: the Board of Education and the Governor are serious about changing Virginia's educational image and output. The initiatives are based upon the perceptions of the Commission and are well intended, if not always well received by the professionals who must create programs to implement these initiatives.

In order to see the trends in the state and to look for patterns over a period of time, the trends stated in Ruch's 1985 report will be revisited. Trends documented earlier in this report will be presented, and finally the direction of education as seen by the practitioners will be discussed. Together they should present to the outsider a look at education in Virginia which represents both those who are making decisions and those who are implementing outcomes of decisions.

The Trends in 1985

Teacher Salary. In 1985, Virginians recognized several topics which were getting attention year after year and requiring programmatic changes in public education. Teacher salaries were on the way up because the legislature was allocating additional money for teacher salaries. Local divisions were getting bad press as they failed to match the General Assembly's 10% allocation for salary raises. This effort to improve salaries has continued, with the last biennium requiring local divisions to give teachers 10% raises or lose some state funds. It is expected that this trend toward higher salaries will continue, if not the requirement for 10% raises annually. With an increased emphasis on attracting and keeping good teachers in Virginia, attention to salary and benefits must remain as a priority. Unfortunately during this period of time when salaries for teachers were rising, administrative salaries were not keeping pace in all localities. Some divisions gave administrators 3% raises while their teachers received 10%. This happened only because the resources available from the local governing bodies could not be stretched to accommodate administrators. The gap between teacher and administrator salaries has diminished to the point that some teachers are earning greater incomes than their supervisors. The salary mandates also affected other budget areas, such that some divisions had no funds for new equipment and new programs. As long as education is funded with local funds to the extent that it is in this state, and as long as the differences remain throughout this state from region to region, it may not be possible to equalize educational opportunities. Yet the issue of salary and amount of money spent on education will remain in the forefront of discussion and concern.

Instructional Improvement Through Mandates. In 1985, the changes being made in Virginia's instructional program were coming through the accreditation standards. Primary attention was given to new graduation requirements. In 1989, these standards and SOQ continue to structure change in the Commonwealth by holding divisions accountable for the mandates of these two documents. Requirements for remedial programs, administrative plans for the use of state testing results, elementary guidance counselors, programs for potential dropouts -- these are but a few of the program requirements that local divisions are attempting to implement with minimal financial support and virtually no technical assistance from the state. In the past 10 years, the administrative review has served as the watchdog which reminded school administrators that these programs had to be in place and meet minimal requirements. With the dissolution of administrative review for accreditation and SOQ, divisions will feel less pressure to put something in place just for the sake of having to meet the mandate. The exact method of monitoring Standards of Quality and accreditation standards remains unknown to administrators, but they are feeling that any relief from paperwork will assist them in using their time more effectively and allow them to work more directly with teachers.

For a state with such diversity and, indeed, disparity in educational programming to move toward consistency in programming and services requires state monitored mandates. Regrettably, the funds needed for adequate financing and the support staff needed to bring about changes in those divisions which have serious problems do not exist. It will take more than an awareness of problems to resolve difficult issues. In those localities where serious educational problems exist, the state must commit a variety of resources.

Model Innovative Programs. In 1985, the state drew attention to the model school for technology, Varina High School in Henrico County, as well as the Governor's schools for gifted programs. Pilot projects were conducted to determine if merit pay and pay-for-performance would work in Virginia. In addition, the Department of Education offered funds through two sources for innovative programming: State Pilot Projects and Chapter II Block Grant Competitive Projects.

Today there seems to be a different emphasis on model programs. Regrettably, the Department of Education eliminated the pilot project program which gave local divisions matching funds and the incentive to branch into new areas. Chapter II Block Grants have continued, although competitive projects under the new federal guidelines have not been announced [as of yet] for this school year. Title II also awards competitive grants periodically. Divisions had been hoping to see state funds available for piloting programs for four-year-olds, but the only pilot projects for this purpose are being funded either with Chapter 1 or local monies. Model programs have been recognized in the middle school restructuring effort, but it is unclear whether any state funds will be awarded to these or other middle schools for program improvement. There appears to be little interest at the state level in creating additional innovative programs or encouraging the recognition of such. Rather than encouraging innovative programs in the divisions, the DOE is engrossed in overseeing programs which close the gap on disparity across the state, such as remedial efforts and the restructuring of principal certification.

Beginning Teachers. The trend to improve the pool of beginning teachers has continued since 1985. BTAP appears to be institutionalized, colleges have restructured their teacher education programs, salaries have improved, and, with the exception of certain areas like special education, Virginia is not experiencing a teacher shortage. The accreditation standards call for teacher evaluation every two years. The emphasis on attracting good teachers and keeping them in the classroom will continue.

Home Instruction. When the legislation was passed that permitted parents to keep children home for schooling, some educators sounded the alarm. While certain areas of the state have a number of parents home schooling, other areas have only a few. This option has not become a major problem in the state. While the numbers of students being taught at home may increase, there is no reason to expect large numbers of children to experience this option. Futurists predict more working mothers and more single parents in the coming years, so the option may not really be available to most parents anyway.

Elected School Boards. As in 1985, there is a lobby for locally elected school boards. There is no reason at this time to believe that this option will become pervasive in Virginia during the next few years.

Progress Toward Basic Skills. The Standards of Learning Objectives were the topic of discussion in 1985. Educators believed that these objectives, being developed for all subjects in all grades, would be implemented as a state curriculum. The SOL's have become optional, although many divisions do use them during curriculum revision and use the SOL assessment procedures in lieu of other criterion referenced tests. They do serve an important role at textbook adoption time, as the state requires any publisher whose book is listed to show a strong correlation between the published program and the SOL's. (Divisions do not have to adopt from the state list, so texts which don't meet the objectives can still be used.)

The greatest emphasis at this time on basic skills is seen with the competency testing revision. For a number of years, Virginia students have been required to pass a competency test administered at tenth grade. That test has been replaced by the Passport Literacy Test now given at sixth grade. The change in the test being used and the earlier administration of the test demonstrates that Virginia continues to be committed to basic skills, and perhaps more so. Also, the emphasis on remedial education, beginning with first graders, indicates that educational leaders want more done earlier to ensure successful school experiences for all students, especially those who are at-risk of dropping out of school. While basic skills is generally defined as reading, writing, and math by those discussing remediation or the literacy test, other areas such as problem solving and computer skills are beginning to receive attention, and they may move into the category of skills viewed as basic for survival in the year 2000.

Debate Over Goals of Public Education. Ruch saw policymakers arguing for "broad accomplishments from a narrower curriculum" in 1985. Undoubtedly, the emergence of SOL's reinforced his view. In 1989, there is less debate. The goals for Virginia's educational system as set by the State Board of Education and clearly defined earlier in this report, are broad but all are pointing toward excellence throughout the system. One senses that the Board truly wants this state's educational program to be diverse enough for all students to succeed, but specific in requiring all students to meet minimum standards and complete certain course requirements. The concern over differences in education throughout the state are apparent, and an attempt to control and broaden opportunities for students is evidence of this concern. The mission of the Board as they see it is clear. They know what they want to do, and they have demonstrated a sense of urgency in their mission. Unwilling to provide planning time for many of the initiatives, this group of policymakers wants problems attended to rapidly and with the same commitment they have demonstrated.

The Department of Education reflects the mission and action plan of the Board. Department staff tend to work on the projects and programs which evolve from the directives of the Board. This is evident to local division staff who hear DOE personnel talking the most about the initiatives of the State Board. It is their agenda, and with so heavy an agenda there is little time for technical assistance to schools or time to help with the instructional problems which continue to exist at the building level throughout the Commonwealth. It is interesting to note that with some high priority programs, such as middle school restructuring and remedial education, only one or two persons at the Department are assigned to work with 136 school divisions. During the planning and implementation phases of programs such as these, when local divisions really need assistance in researching and accomplishing the goals of the State Board, there is no real help available other than by phone. Perhaps this is because there are so many projects and activities underway in the DOE that many of the staff are too specialized to have the time or the knowledge base to help.

Variance Among Divisions. Demographic information presented earlier supports the notion that Virginia's divisions are different, educational outcomes vary across the state, and resources are significantly different from locality to locality. In fact, Virginia is one of the most diverse states in the nation, with two of the largest school systems in the country and many small, rural divisions as well. From Appalachian coal miners to NOVA government employees to Eastern Shore fishermen to Southside tobacco farmers, Virginia is diverse and her schools reflect this diversity. This will not change. As resources become more disparate across the state, the schools will feel this result, and the state may become groups of haves and have nots. While the funding formula for Virginia was recalculated to address disparity, the reliance on local resources, and the values and lifestyles of individual communities will maintain a state with wide differences in the future. While the policymakers are to be commended for "equalizing" the basic aid formula and for purchasing computers for every sixth grade classroom in the state, it will take a great deal more than equal numbers of "things" to deal with disparity in Virginia.

Financial Support. As in 1985, Virginia continues to hold high aspirations for education without the funding support needed to accomplish these goals. Until the Standards of Quality are fully funded, Virginia can continue to be viewed as a state which does not fully support the programs it requires divisions to implement.

Emerging Trends

There is one major trend which supercedes all others in the Commonwealth's educational system. This trend has a greater impact on education than all of the others and can impact the system for a longer period of time. It is one clearly seen by local division administrators and boards of education, and one which at this time cannot be valued as good or bad due to its recent emergence.

Trend: In Virginia, the education agenda is clearly set by the Governor and the Board of Education. That in itself is no surprise, but only recently have the Governor and Board so clearly articulated their goals and specific program initiatives for the state. In the past, the Board of Education has worked with the Superintendent for Public Instruction in developing plans for education on a state-wide basis. State sponsored programs were introduced periodically, but not at all with the urgency and quickness of the initiatives presented to Virginians in the past three years. Every major effort school divisions are being asked to consider refers back either to the Governor's Commission Report which the State Board of Education is implementing or directly to the Governor himself. Some activities, such as the focus on international education, extending the study of languages, and geography in the curriculum come directly from the Governor's interest in international trade.

This move toward more centralized control of education makes local division administrators and school boards uncomfortable. They feel they have less control over the educational program in their schools, they must shift limited resources to provide for state-mandated programs, and they spend considerable more time completing paperwork for the state than in previous years. With little time to plan the implementation of new programs, often local educators cannot generate the enthusiasm and commitment needed to create an environment for change.

There is also a belief in the field that the control of education is moving away from the Department of Education and more into the Governor's office via the Secretary of Education. This is reinforced by events such as a division being referred to the Secretary's office to answer questions regarding budget, the kind of questions previously answered by the DOE. Also when divisions see dropout prevention programs administered by the Secretary and drug prevention grants issued by the Attorney General, it appears that others are doing work previously conducted by the Department of Education.

Trend: A related trend highly visible in Virginia is the increasing role of the legislature in the operation of public schools. While the General Assembly traditionally has participated in funding the schools and looking at issues such as teacher salaries, new issues are gaining the interest of General Assembly members. For example, some legislators have proposed the elimination of small cities in the state. Viewed as being more efficient, small cities consolidating with adjacent counties would impact on education significantly. Some of the small city school divisions in Virginia are perceived as the Commonwealth's best school systems, with test scores to back up this belief. Consolidation of this type would not only impact upon educators' jobs, but it could diminish community support for schools, taking away the feeling that members of the community control their schools.

Senate Joint Resolution No. 171, passed by both houses in February of 1989, establishes a commission to study efficiency in the use of public education funds. This watchdog commission has many local division educators very concerned. The commission will:

> review the requirements of state and federal mandated educational programs to determine the feasibility of consolidating certain programs, services and school division functions,
>
> assess whether and to what extent the instructional, supervisory and administrative staff levels exceed need, particularly given the number of students enrolled in the public schools of the school division,
>
> review the organizational, planning and budgetary structures of the school divisions to determine the need and ways in which such structures may be improved to maximize the utilization of personnel and funds, and
>
> recommend such statutory, regulatory and policy changes as may be necessary to facilitate the efficient use of public education funds.

If this commission can demonstrate that small divisions in Virginia are inefficient by standards yet to be developed, and if they successfully actuate the consolidation of school divisions throughout Virginia, the days of the small city schools may be numbered.

The development of this resolution and commission gives evidence to another trend in Virginia. **Trend:** Policymakers and legislators are interested in identifying school systems that perform well and those that do not. The above resolution speaks only to those who do not perform up to some standard. In addition to this effort by the legislature, the State Board of Education intends to recognize those schools (as well as divisions) who are successful in meeting criteria deemed as representative of effective schools. Likewise, those schools who are not successful shall be identified and given some financial support in making changes for improvement. While it is understandable and perhaps desirable to identify successful schools to give them the recognition they deserve, many educators are fearful that the identification of ineffective schools will cause a severe morale problem within the school division and its community.

The proposal to the State Board for the Virginia Educational Performance Recognition Program (EPR) lists seven objectives which will be assessed:

- preparing students for college
- preparing students for work
- increasing the graduation rate
- increasing special education students' living skills and opportunities
- educating elementary school students
- educating middle school students
- educating secondary school students[20]

The outcome indicators for each of these objectives as currently proposed to the Board are provided in Appendix C. The Board of Education is expected to take action on the EPR recommendation later this fall.

Beginning with the July 1990 annual reports made by each division to the DOE, a new reporting system will allow the state to specifically see how categorical and other monies are spent. For example, gifted funds that come to the division can clearly be monitored using this new format, showing exactly how much money was spent on gifted personnel, their fringe benefits, their substitutes, staff development, gifted program materials, travel, etc. Prior to this time, all personnel were accounted for together in one category and it would have been impossible to determine if a division was spending gifted funds exactly as it said it was. This and other information will be available to the state. Divisions can be monitored in ways they never were before.

Trend: Another direction in which the state is moving is toward a stronger commitment to leadership development training for school administrators. The Board of Education and State Council for Higher Education have spoken to this concern in the restructuring plans for principal certification. Additionally, the DOE has instituted the Virginia Center for Educational Leadership which is funded jointly by the Department and federal government. There is a recognition present that all administrators, including those in the Department, need leadership training. With the birth of VCEL, the Department of Education is committing resources to this effort. It may take some time before all administrators in the Commonwealth participate in the VCEL programs or understand the value of on-going training, but with the commitment of the State Board as well as the State Superintendent and his deputies, there is much promise for offering Virginia's administrators some of the quality training programs heretofore reserved for the business community.

Trend: Virginia educators have received a strong message to involve the business community in all school ventures. Accreditation standards and new programs require involvement of the community in program planning and as members of advisory committees. In addition, schools are encouraged to build strong alliances with business and industry to share in their good thinking about ways of doing things, as well as to seek their commitments for cooperative projects. Partnerships between business and education are in the infancy stage. More needs to be done to acquaint school personnel with the possible outcomes of a partnership with local business because this emphasis is not expected to lessen.

Trend: An emphasis on programs for students at-risk of failure in school, especially the potential dropout, will continue. Virginia has just begun programs for remedial education, the potential dropout, students at-risk, and marginal learners. Much more is expected and needs to be done. Since the Governor's office is involved with this initiative, there is no reason to expect this emphasis to lessen. However there is no evidence that additional resources will be provided at the state level to the DOE to provide technical assistance to divisions.

Trend: Assessment and the importance of test results is pervasive in this state and is not expected to change in the near future. As long as educators are accountable for the dollars they spend and as long as students are viewed as products in an industrial model of education, test scores will be one of the major measures of school success. If the EPR program is implemented and widely discussed, that program may reinforce this belief, or it could demonstrate that other factors are as important as test scores.

Discussion. These trends indicate that the Commonwealth has an agenda for education which reflects an era of accountability. Although attention is placed on sound, well-articulated needs, such as serving students at-risk, there exists an overriding concern that some divisions are not performing or cannot perform the tasks required to bring about desired results. Schools will be monitored to determine effectiveness and division management will be examined for efficiency and waste.

Absent in this list of trends is active attention to the future in Virginia. Educators and policymakers are attending to the present situation in the Commonwealth's schools, attempting to improve them by bringing them closer together in the services they offer to students. Little is being said about long-term societal, family, technology, labor, management, and value trends, as well as educational trends, seen by futurists. As the major agent for socialization in society, schools will continue to respond to changes in the family and society and modify their services, and indeed their function, to help children accommodate these changes and become contributing citizens.

Virginia's public school divisions will begin addressing the changes of the 21st century during the coming decade. They will do it with or without leadership at the state level. Just as schools purchased computers before there was a plan for technology for the state, the schools must look forward and plan for trends [which can already be identified] which will impact upon life in the future.

The World Future Society prepared a report in 1988[21] which speaks to 71 trends throughout society. The authors made an interesting comment about education:

> The most important area affecting America's future is education. The education trends we describe show where the United States is going in education, who the new actors are, and what the new educational technologies will be. But there remains much work to be done. It is imperative that the United States improve its education system to compete in the increasingly competitive and global economy.

There is no question but that the Governor of Virginia is correct in encouraging international education in the state. But efforts to broaden the curriculum must be more visible to Virginia's teachers, and discussions about the importance of global studies must be encouraged in order to realize a real change in the classroom. Currently, teachers are receiving a message that those things which are solely important are the literacy skills tested by the state. Until program assessment is broadened to look beyond standardized tests, until programs for the gifted and programs for special education are evaluated rather than monitored for compliance, Virginia will be unable to reshape her curriculum and instructional program throughout the state to respond to trends of the 21st century. Forward thinking educators will move divisions into innovative or revised programs which respond to these trends, but they will tend to be those in divisions with the resources, both human and financial, to make program changes. Those without the resources will wait for leadership from the state. If policymakers are serious about closing the gap on disparity in this state, they must continue to look forward to societal needs of the future, providing leadership to the divisions so that all can move toward a responsive educational system which is proactive and change oriented.

See Appendix D for a list of the World Future Society's educational trends for the year 2000.

EDUCATIONAL NEEDS AS IDENTIFIED BY THE AEL BOARD MEMBERS FROM VIRGINIA

The teachers, administrators, and professors who sit on the Appalachia Educational Laboratory's Board of Directors bring to AEL the perspectives of their various roles and reflect some of the best thinking about education in the Commonwealth. AEL's internal evaluators and the consultant for this report believe that input from these educators regarding the needs in this state should be included in any summary of Virginia's needs.

In order to facilitate the identification of needs, AEL gathered data from several sources to compose a list of 30 need statements. These needs represent a broad data base of information from the four states served by the Lab. Using a list of educator requests for information and a data base of current topics in education in the four state region, AEL constructed a list of questions which cover general topics, such as educational reform, as well as some specific topics, such as AIDS information for students. A copy of the 30 statements can be found in Appendix E.

At the July 22, 1989, state caucus meeting of Virginia's AEL board members, the author of this report met with the caucus and asked them to identify the ten greatest needs they saw in this state. The caucus participated in an exercise which allowed them to prioritize items quickly so that the remainder of their meeting could be spent in discussion of these items. Six of the eight board members were present. An AEL observer was also present, but neither she nor this author participated in the decision-making process which facilitated the ascension of 10 needs.

Ten Greatest Needs Identified by AEL Virginia Caucus

Items Ranked by Priority

1. **We need to study the use of technology as a means for improving the delivery of instruction to all children.**

2. **We need programs that address the special needs of small, rural schools.**

3. **We need improved financial support for local schools.**

4. **We need ways to ensure that educational policy is informed by the outcomes of educational research and development.**

5. **We need special programs for at-risk youth in danger of dropping out of school.**

6. **We need to improve the involvement in decision making of those implementing and those affected by decisions at the school level.**

7. **We need programs to improve the care and education of preschool children.**

8. **We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.**

9. **We need more community support of local public schools.**

10. **We need to improve professional development programs for teachers and school administrators.**

Discussion. As one might expect, a number of the needs statements chosen by the caucus are topics being emphasized by the state. Others are being addressed in local divisions. However those statements, which are identified by practitioners but are not on the state agenda, deserve careful consideration. Those who work in the educational community every day may see areas of need which have not gained statewide attention.

Needs expressed by the caucus which are a part of the state agenda include: the use of technology to improve services; programs for students at-risk; and improved teacher preparation and induction. It must be noted, however, that the technology initiatives most recently implemented were limited to electronic classroom alternatives at the secondary level and computer utilization for remedial education at the sixth grade level. The DOE has a long range plan for technology which is very exciting. With the employment of an Assistant Superintendent for Educational Technology, the Department of Education has made a commitment to technology which will only be restrained by financial limitations. The key phrase in this first priority need statement is "to all children." Teachers are very encouraged about the possibility of truly differentiating instruction with the assistance of emerging technologies. They are ready to move beyond computer-assisted instruction into telecommunications options, including the sharing of information among schools.

Many schools are focusing on services for at-risk students. Certainly the state's requirements to provide remedial instruction to students in the lowest quartile and to design dropout prevention programs help educators rethink their services for this kind of student. But "at-risk" means more than not achieving in school; it means dealing with life circumstances which are different than our teaching population experienced. Teachers will continue to need staff development and multiple resources to appropriately serve the at-risk population.

With the implementation in 1990 of new teacher preparation programs, Virginia can expect changes in this area, but results will not be seen for several years. Until that time, staff development efforts must be directed at the beginning teacher.

Seven of the ten priority statements represent areas not directly touched by Virginia's mandates to schools. For example, the second highest priority, small, rural schools, receives notice at occasional meetings, but no consistent attention is given to it in Virginia. In fact, many small schools feel in jeopardy with the legislature looking at funding efficiency and the possibility of division consolidations.

The area of Virginia which is growing is the urban crescent. Rural localities have lost enrollment and do not expect to have major growth in the near future. There is no reason to expect the small, rural schools of Virginia to disappear unless local policymakers or the state encourages widespread consolidation. The uniqueness of the small school and rural education should be discussed and information, such as AEL's Occasional Paper, *A Demographic Study of Rural, Small School Districts in Four Appalachian States*[22], should be disseminated before decisions are made to eliminate schools.

During the AEL caucus meeting at which these need statements were discussed, it should be noted that five of the six members who were present represent rural localities. The sixth member from an urban area of the state took exception to this need statement, indicating that while there are legitimate needs in the rural environment, it is the urban schools that need particular attention today. She felt "outvoted" in the prioritization process. The consultant observed that if the caucus represented populations in the state in a more representative fashion, the caucus member's concern about urban education might have ranked higher. (Four of the six members are from Southwest Virginia - Appalachia area; the fifth is from the Shenandoah Valley.) The writer brings this to the attention of the reader only because urban education needs should not be overlooked in this state, and the absence of those needs in the priority list may reflect local identification rather than certainty about educational concerns.

The need for improved financial support for education was high on the priority list. While it was viewed as the type of problem an agency like AEL cannot help with, the strain on the educational dollar is felt across the state and the problem is very real. Need statement #9 sits adjacent to the need for financial support, as community support is necessary in keeping school funding at an appropriate level. Additionally, community support is needed as programs are modified to address local needs.

Caucus members clearly articulated the need for policymakers to base decisions upon educational research and good practices. There was some feeling that decisions are based on other, more intrinsic motivations. It is unclear how to best educate policymakers, especially those not experienced as professional educators, about the variety of topics in the profession.

Site-based decision-making is currently not emphasized in Virginia. Administrators are required to involve teachers in the planning process in their schools, but little has been done to prepare principals and other administrators with shared decision-making. This is a topic which is receiving much attention in the supervision literature, but Virginians may be reacting more to the growing control of education at the state level. As mandates are passed on from the DOE to the administrative offices to the principals to the teachers, teachers have little input and/or control over the implementation of these new programs and requirements. The principals feel as powerless as the teachers. Additionally, teachers are reading more about shared decision-making and want to gain more control over what they teach and what happens in their classrooms.

Although the State Board of Education recognizes the research on preschool programs and encourages the piloting of programs for four-year-olds, many educators have been disappointed that the state has not taken a more aggressive role in developing programs for young children. Need statement #7 speaks not only to the educational needs of young children but to the care of these children. Perhaps the practitioners see daily the effects of limited day care facilities, single parent homes, and latch-key situations. Administrators and policymakers need assistance with long-range planning for child care in the schools (including before- and after-school programs), and teachers need support for designing activities which meet the needs of this growing population.

The need to improve professional development programs for administrators is being addressed by the state as programs are being developed and delivered by VCEL. With the implementation of the individualized recertification point system, teachers will certainly have more input into their own staff development. But the caucus looked beyond delivery systems to the quality of programming, which won't necessarily improve with a new recertification model. Local divisions must continue to find good resources for staff development. For those divisions who do not have full-time staff development coordinators, an attempt should be made to strengthen the DOE's professional development councils, networking like divisions together, disseminating information about excellent resources, including effective consultants, and better utilizing the telecommunications efforts of the Department for improved inservice classes and teleconferences.

SUMMARY OF MAJOR NEEDS IN VIRGINIA

Disparity vs. uniqueness: Virginia educators and policymakers are faced with a dilemma. How do they close the gap on educational disparities in a state as diverse as this one without sacrificing the uniqueness of the rural areas, small schools, and locally controlled educational systems?

Responding to students who are at-risk of failure: How can remedial education programs be designed to respond to individual needs and be based upon the best practices research has to offer? When are the needs of preschoolers going to be addressed? Which public agency is going to provide parenting programs? Are there ways to serve at-risk learners without labelling them? What skills do teachers need to affect change in these students?

Technology Awakening: How are school personnel with limited budgets and limited time going to keep pace with emerging technologies? Will there ever be a time when schools can catch-up with needed equipment?

Educational Leadership: As a generation of school administrators prepare to retire, is leadership being emphasized and are potential leaders being identified? Are schools prepared to follow models in the business world which assign more responsibility to workers (teachers) as they become active partners in decision-making and problem-solving? Can education attract the kind of people needed to lead schools in the coming years?

Professional Development: Can the profession offer the kind of personal growth opportunities which will stimulate individuals to become better thinkers and perform better in the workplace? Can personal and professional growth become so satisfying that it becomes an incentive for staying in the profession?

Regulation of Education: Must improvements in the educational system be closely tied to regulation of education in the form of state mandates and directives? What is the role of professional educators in setting the educational agenda for the state?

Technical Assistance: Who is going to provide the wide range of technical assistance needed to address the variety of topics of concern in today's schools, to schools which are as diverse as those found anywhere in the nation?

RESEARCH AND DEVELOPMENT RESOURCES AVAILABLE TO SUPPORT ELEMENTARY AND SECONDARY EDUCATION

There are a number of resources available within and outside of the state of Virginia for research and development purposes. As cited in the 1985 report, professional organizations play a major role in this effort. Additionally, universities and private consultants assist local divisions with their R & D. Some larger divisions in Virginia house their own research departments and conduct sophisticated studies in-house. Yet many of the school divisions depend primarily upon universities, consultants or professional organizations to conduct research, and professional organizations and the Department of Education to disseminate it. From time to time, publishers sponsor research-based seminars which feature nationally recognized speakers. These activities are usually tied to the marketing of a textbook or supplementary instructional materials.

Since the DOE no longer conducts pilot studies with the divisions and has only a few innovative projects conducted with federal grant monies, the state cannot be viewed as an active participant in educational research. The exception to this would be a longitudinal study looking at student performance as related to school entrance screening tests, as well as special reports conducted by the Division of Research and Testing.[23] The Department does disseminate research findings at conferences and in a few publications, but there appears to be no overall plan for the dissemination of research. The DOE sponsors a testing and research conference annually, but this meeting usually attracts testing directors rather than central office personnel who are attempting to interpret research to teachers and use it in planning programs. At other Department conferences research findings are major components of presentations. But many conferences, such as those for gifted education, remedial education, and Chapter 1, must include adequate time for administrative considerations and regulation updates. Many educators feel they gain the most new information about research findings at national conferences.

Organizations, such as the Appalachia Educational Laboratory, play an important role in helping schools with research and disseminating information. The Education Network of Virginia, part of the National Diffusion Network, is also effective in acquainting school divisions with proven instructional programs. The Commonwealth Center for the Education of Teachers, the Southern Rural Educational Alliance, Phi Delta Kappa, the National Education Association, and the Mid-Atlantic Equity Center represent other educational organizations and agencies currently providing R & D efforts in Virginia.

RECOMMENDATIONS OF PRIORITY TOPICS FOR A E L PROGRAMMING

Information related to preschool children: preschool programs in the public schools; coordination with child care facilities and social service agencies; early identification and service to preschoolers with special needs

Programs that address the unique needs of small schools, rural schools, and urban schools

Public relations and marketing training to gain support for public education; information on building school-business partnerships

Support to institutions of higher education as new teacher education programs are implemented; staff development programs for new teachers who have received fewer education courses in their program of study

Programs and services for students at-risk, including drop-out prevention programs

Delivery models for dissemination of educational research, especially ways to reach policymakers

Dissemination of current research (since 1980) on middle education

Dissemination of effective leadership development programs for administrators and prospective administrators

Dissemination of effective remedial education programs, especially secondary level programs which address reading, writing, and mathematics

Emerging technology applications for public education, especially telecommunications among various institutions of education

Appropriate use of test results

Design of international education programs and resources for supplementing the current social studies and foreign language curricula

Location of software to build skills tested on the Literacy Passport Test; other assistance for the preparation of that test; appropriate remediation measures for students who do not pass the test

AFTERWARD

A review of education in a state cannot be comprehensive without looking at the system over a long period of time and with masses of information. For a report such as this, focus is placed on the major events in the state and the persons who are making these events occur.

The author notes surprise that in this review, more attention to special education did not emerge. Undoubtedly if interviews had been conducted with local school administrators, a concern about the growth of special education and the large number of students identified as learning disabled would have been voiced. Local school divisions feel the effect of special education growth on their budgets. But of more concern is the labelling of large numbers of children who are pulled-out of regular education daily for small group instruction by special teachers. As educators learn more about the negative effects of tracking and homogeneous grouping, they are concerned about the amount of time these students are grouped together. As educators learn more about the importance of communicating high expectations for all students, they are concerned that too little of the curriculum is taught to special students.

The Regular Education Initiative, given birth in the fall of 1986 by Madeleine Will, assistant secretary for special education and rehabilitative services in the U. S. Department of Education, questions many of the underlying assumptions about serving mildly disabled children in pull-out programs. The federal government has been funding proposals to encourage experimentation with programs to serve disabled students in the regular classroom.[24] Virginia educators need to hear more about these studies. So the author is adding one more topic for AEL programming consideration:

> **Dissemination of research to improve services for learning disabled students, including increased instructional time and changing grouping patterns**

This report presents a picture of an educational system which is becoming more centralized and more standardized. While local divisions still choose textbooks and hire teachers and decide how they are going to schedule their day, the emphasis of their instructional program is being set at the state level. This has come about as policymakers have seen growing evidence that Virginia is a state with great diversity and much disparity in education. Virginia is also a state of vast resources, including outstanding universities and corporations which can assist in the task of educating Virginia's students. The Virginia Board of Education and the Governor are committed to making the Commonwealth one of the leading states in education. The actions of the Board and their strategic plan indicate a serious attempt will be made to move Virginia forward in the coming decade.

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Appendix A

Strategic Plan of the Virginia Board of Education

Strategic Plan of
The Virginia Board of Education
1988 -1994

It is a pleasure for us to present our first strategic plan to Governor Gerald L. Baliles, members of the General Assembly, and all Virginians. This has been an especially eventful year as we strive to make Virginia's public schools among the very best in the nation.

Preparing this plan required an in-depth study of the mission, goals, and objectives of the Board of Education for the next six years. This strategic planning process, as it is called, will allow Virginia to "get ahead of the curve," anticipate the direction of public education, and lead the rest of the nation into the 1990s.

During our study, we identified seven broad educational issues facing Virginia: disparity, illiteracy, teacher education, educational leadership, technology, middle schools, and accountability. This plan identifies what the Board intends to do in addressing each of these issues.

Much progress is being made to equip today's students with the essentials for coping with an increasingly complex society. The one constant of the future will be change. No one group, the Board of Education included, can do everything to prepare students for this future. But through the strategic planning process, we have discovered where we are and what is needed. This plan summarizes the challenges facing each of us as Virginia becomes a leader in education.

Robert H. Deford, Jr.
President, Virginia Board of Education

MISSION

The mission of the Board of Education is to ensure that all children of school age in Virginia receive the highest quality education appropriate to their individual needs and abilities. In keeping with Article VIII of the Constitution of Virginia, the Board establishes standards of quality, subject to revision only by the General Assembly, and exercises general supervision of the public school system. The Board has primary responsibility and authority for establishing educational policy.

In fulfilling this mission, the Board determines what is needed and provides leadership in how it must be attained. The Board actively involves citizens and school divisions in generating the policies and programs necessary to meet its educational commitment. Through the Department of Education, the Board monitors local compliance with educational mandates and offers professional assistance in support of local programs

GOALS

The Board of Education shall provide leadership staff development, educational services, and compliance monitoring to assist each school division to aid each pupil to the full extent of his or her abilities to:

- Develop competence in the basic learning skills.
- Develop the intellectual skills of rational thought and creativity.
- Acquire knowledge and process skills of science and technology.
- Acquire broad knowledge and understanding of the Humanities.
- Progress on the basis of achievement.
- Graduate from high school and qualify for further education and/or employment.
- Develop personal standards of ethical behavior and moral choice.
- Participate in society as a responsible family member and citizen.
- Develop a positive and realistic concept of self and others.
- Acquire an appreciation for and a sensitivity to people of various races.
- Practice sound habits of personal health and physical fitness.
- Enhance the quality of the environment.
- Develop skills, knowledge, and attitudes regarding the arts.
- Acquire a basic understanding and appreciation of democracy and the free enterprise system

An indicator of success will be Virginia's progress toward achieving first rank status among the states. These goals will remain consistent with the goals of public education as published in the Standards of Quality.

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DISPARITY

Summary: Virginia must reduce the educational performance gap among school-age children and school divisions in the quality and scope of educational programs.

Objectives

Beginning with children at risk, Virginia's school divisions will provide voluntary developmental preschool programs for four-year-old children.

The state will support programs to increase the performance of students from racial/ethnic groups such as American Indian, Asian or Pacific Islander, Black, Hispanic.

The state will support college preparation programs for students from racial/ethnic groups such as American Indian, Asian or Pacific Islander, Black, Hispanic.

The state will expand its support for and monitoring of division and regional nonresidential special schools and programs for gifted students.

The Department of Education will develop a state plan to ensure greater cooperation among the agencies concerned with the welfare and education of special education students.

The Department of Education will monitor the adoption and implementation of a Family Life Education program.

The Department of Education will monitor the 1988 Standards of Quality funding formula to determine funding disparities.

The Department of Education will determine the advisability and feasibility of establishing residential schools for gifted students.

The Department of Education will determine the advisability and feasibility of establishing magnet schools for low-achieving students.

ILLITERACY

Summary: Virginia must eliminate illiteracy throughout Virginia's school divisions.

Objectives

Remediation will be provided for studen scoring in the bottom national quartile on standardized tests.

Smaller classes will be required in the firs grade and in English classes.

The Department of Education will assess the educational needs of students who speak English as a second language to determine the additional costs of educating this population.

TEACHER EDUCATION

Summary: Virginia must build one of the nation's best school systems by continuing to attract teachers of the highest caliber.

Objectives

An undergraduate degree in an arts and sciences discipline will be required for all teachers educated in Virginia.

Virginia's approved program standards for prospective teachers will be revised to limit professional education course requirements to 1 semester hours.

All colleges and universities will review and restructure their programs for educating teachers.

Virginia will have competitive teacher salaries that will attract and keep highly qualifie teachers.

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The state will determine the feasibility of providing financial incentives to school divisions to help them develop ways to recruit and keep effective teachers in the classroom.

The number of forgivable loans for teacher candidates will be increased.

Individualized recertification plans, based on a point system, will be required for each teacher.

The advisability and feasibility of all teachers having, or working toward, graduate degrees will be studied.

EDUCATIONAL LEADERSHIP

Summary: Virginia must promote student achievement by creating effective partnerships among teachers, their principals, the students' parents, and community leaders.

Objectives

More emphasis will be placed on leadership in the training of principals.

School divisions will evaluate and compensate principals on the basis of performance.

More volunteers, aides, and part-time instructors will be used to assist teachers.

Training programs will be required for school board members and division superintendents.

The Department of Education will provide leadership in special education by monitoring programs, by improving pre-service and in-service training, and by assessing placements determined by individualized educational programs (I.E.P.).

International education will be implemented in the curriculum at every level, grades K-12, where appropriate.

Research/planning capability will be developed to assist in policy analysis and development.

Less effective Department of Education programs will be assessed and "sunset provisions" will be established for them.

Future directions for the two schools for the deaf and blind will be determined.

A model for vocational assessment centers will be designed which integrates the assessment center for handicapped students and outlines a five-year plan for implementation.

Joint ventures will be established with the Department of Economic Development so that the Board may become more responsive to the educational needs of new businesses and industries coming into the state, and of those already established.

Innovative ways to expand cooperative/work experience programs for students in vocational education classes will be explored, to make maximum use of business and industry resources.

TECHNOLOGY

Summary: Virginia must make educational technology available to everyone in public school education.

Objectives

The Department of Education will develop a Five-Year Plan For Technology which has a "foundation level" plan as a component. Each school division should include technology as a component of its six-year plan.

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Electronic classrooms will be available to all schools.

Teachers in the middle school grades will be provided with microcomputers for the classroom and with instruction in their use. Upon completion of the middle school initiative, the program will be expanded to include elementary and secondary schools.

The Department of Education will establish an electronic communications network with school divisions and develop a standardized database.

The Virginia Public School Authority will provide loans to help school divisions buy technological equipment.

MIDDLE SCHOOLS

Summary: Virginia must convert one of its major problems into an asset.

Objectives

The Department of Education will provide leadership for middle school grades 6, 7, and 8. In every locality, all middle school grades shall be restructured by June 30, 1996.

Virginia will set a goal that no school division shall have a dropout rate higher than the present statewide average, and that the present statewide average will be reduced by one-half.

Middle school programs will provide assistance to students who are potential dropouts.

ACCOUNTABILITY

Summary: Virginia must hold the state and local school divisions accountable for educ tional standards, instruction, and student achievement.

Objectives

The Board of Education will make recommendations to the Governor and General Assen bly which redefine the duties and responsibiliti of the Board of Education, the Superintendent o Public Instruction, and local school boards, superintendents, and principals.

The Superintendent of Public Instruction shall develop, and the Board of Education shall approve, criteria for determining the effectiveness of the Commonwealth's public schools. When approved, these criteria will be integrated into the accreditation standards.

Funds will be established to reward effective schools and to help schools needing corrective action.

The Board of Education will propose a resolution to the General Assembly to revise the statute establishing criteria by which the Board c Education may consolidate school divisions that fail to meet the Standards of Quality.

The present continuing contract law relating to school teachers and administrators will be reviewed by the General Assembly.

The Department of Education will provide quantifiable assessments in administrative review, accreditation, and vocational and special education.

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Appendix B

Calculation of the Composite Index

CALCULATION OF THE COMPOSITE INDEX OF LOCAL ABILITY-TO-PAY

$$.5^{*}\left[\frac{\dfrac{\text{Local True Value of Real Property}}{\text{Local Average Daily Membership}}}{\dfrac{\text{Total Local True Values of Real Property Statewide}}{\text{Total Average Daily Membership Statewide}}}\right] + .4^{*}\left[\frac{\dfrac{\text{Local Personal Income}}{\text{Local Average Daily Membership}}}{\dfrac{\text{Total Personal Income Statewide}}{\text{Total Average Daily Membership Statewide}}}\right] + .1^{*}\left[\frac{\dfrac{\text{Local Taxable Retail Sales}}{\text{Local Average Daily Membership}}}{\dfrac{\text{Total Taxable Retail Sales Statewide}}{\text{Total Average Daily Membership Statewide}}}\right] = \text{Average Daily Membership Composite Index}$$

$$.5^{*}\left[\frac{\dfrac{\text{Local True Value of Real Property}}{\text{Local Population}}}{\dfrac{\text{Total Local True Values of Real Property Statewide}}{\text{State Population}}}\right] + .4^{*}\left[\frac{\dfrac{\text{Local Personal Income}}{\text{Local Population}}}{\dfrac{\text{Total Personal Income Statewide}}{\text{State Population}}}\right] + .1^{*}\left[\frac{\dfrac{\text{Local Taxable Retail Sales}}{\text{Local Population}}}{\dfrac{\text{Total Taxable Retail Sales Statewide}}{\text{State Population}}}\right] = \text{Per Capita Composite Index}$$

$$\boxed{.6667 \times \text{Average Daily Membership Composite Index}} + \boxed{.3333 \times \text{Per Capita Composite Index}} = \text{Local Composite Index}$$

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*The constants (.5, .4 and .1) represent the average share of local revenues gathered from real property taxes, charges and miscellaneous revenue, and the 1 percent local option sales tax, respectively. Personal income data are used in the above formula as a proxy for the taxes derived from local charges and miscellaneous revenue because detailed information on the latter is not available. This is specified in the Appropriations Act.

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Appendix C

Performance Recognition Program Indicators

TABLE 1
Educational Performance Recognition Program
Outcome Indicators for 1989-90

Preparing Students for College	Preparing Students for Work	Increasing the Graduation Rate	Increasing Special Education Students' Living Skills & Opportunities	Educating Elementary School Students	Educating Middle School Students	Educating Secondary School Students
Receiving the Advanced Studies Diploma*	Vocational education completers**	Literacy Passport first time pass rate*	Average daily attendance	Above median 4th grade tests*	Literacy Passport two year pass rate*	Upper quartile 11th grade tests*
Minority students receiving the Advanced Studies diploma	Minority vocational education completers**	Dropout rate*	Absenteeism	Absenteeism	Absenteeism	Above median 11th grade tests*
Taking the SAT*	Graduation**	Minority dropout rate*	Dropout rate	Literacy Passport first time pass rate*	Taking foreign language	Absenteeism
Minority students taking the SAT	Licensure exam pass rate	Absenteeism	Receiving Advanced Studies diploma	Over age students in 4th grade	Minorities taking foreign language	Graduates attending college or completing a vocational education program
SAT scores*	Taking a vocational aptitude test	Lowest quartile 4th grade tests*	Taking Literacy Passport tests	Over age minority students in 4th grade	Taking Algebra I	Taking keyboarding or typing
Taking foreign language	Participation for awards	Lowest quartile 8th grade tests*	Literacy Passport first time pass rate	Physical fitness pass rate**	Minorities taking Algebra I	Receiving Advanced Studies Diploma*
Taking Algebra I	Awards received	Over age students in 4th grade*			Upper quartile 8th grade tests*	Minorities receiving Advanced Studies diploma
Taking advanced placement & college level courses	Lowest quartile 11th grade test*	Over age students in 8th grade*			Above median 8th grade tests*	Extracurricular involvement
Advanced placement test					Physical fitness pass rate	Dropout rate**
Upper quartile 11th grade tests*					Extracurricular involvement	Minority dropout rate
Upper quartile 8th grade tests*						Physical fitness pass rate**
Remedial courses or programs						
College G.P.A.						

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*Data are or will be available.
**Modification is needed in currently available data.

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EDUCATIONAL PERFORMANCE RECOGNITION PROGRAM

OUTCOME Indicators

OBJECTIVE: Preparing Students for College

Indicators for 1990-91	Definition	Source
Receiving the Advanced Studies Diploma*	Percent of high school graduates receiving the Advanced Studies Diploma	DOE, MIS
Minority students receiving the Advanced Studies Diploma*	Percent of Black, Hispanic and American Indian high school graduates receiving the Advanced Studies diploma	DOE, MIS
Taking the SAT*	Percent of 11th and 12th graders taking the SAT	DOE
Minority students taking the SAT	Percent of 11th and 12th grade Black, Hispanic and American Indian students taking the SAT	DOE
SAT scores*	Percent of 11th and 12th graders scoring at or above 1100, of 11th and 12th graders taking the SAT	DOE
Taking foreign language*	Percent of 8th grade students taking a foreign language	DOE, MIS
Taking Algebra I*	Percent of 8th grade students taking algebra I	DOE, MIS
Taking advanced placement and college level courses	Percent of high school students taking one or more advanced placement or college level courses	DOE, MIS and Local School Division (CATS)
Advanced placement test	Percent of students scoring at least 3 or more on an advanced placement test	Local School Division (CATS)
Upper quartile 11th grade tests*	Percent of students (in the school at least two years) scoring in the upper quartile of Tests of Achievement and Proficiency, based on the complete composite score	DOE, Division of Research and Testing
Upper quartile 8th grade tests*	Percent of students (in the school at least two years) scoring in the upper quartile of the 8th grade Iowa Tests of Basic Skills, based on the complete composite score	DOE, Division of Research and Testing
Remedial courses or programs	Percent of first year part or full-time Virginia college students in an academic major required to take one or more remedial courses or in a remedial program	Virginia Institutions of Higher Education
College G.P.A.	Percent of first year part or full-time Virginia college students with a cumulative grade point average of 2.5 or better	Virginia Institutions of Higher Education
Indicators to be added		
Attending college	Percent of graduates attending a two or four year college part or full-time in an academic major	Followup survey

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OBJECTIVE: Preparing Students for Work

Indicators for 1990-91	**Definition**	**Source**
Vocational education completers**	Percent of vocational education students completing their vocational education program when leaving high school (excluding students taking 1 or 2 vocational courses)	DOE, Vocational and Adult Education
Minority vocational education completers**	Percent of Black, Hispanic or American Indian vocational education students completing their vocational education program when leaving high school (excluding students taking 1 or 2 vocational courses)	DOE, Vocational and Adult Education
Graduation**	Percent of vocational education students graduating from high school or obtaining a certificate, of total number of vocational education students	DOE, Vocational and Adult Education
Licensure examination pass rate**	Percent of students passing licensure examinations, of total number taking licensure examinations (LPN and cosmetology)	DOE, Vocational and Adult Education
Taking a vocational aptitude test	Percent of 12th grade students who have taken a vocational aptitude test or interest inventory	Local School Division (CATS)
Participation for awards	Percent of vocational education students participating for district, regional, state and national awards for the year, of the number of vocational education students	Local School Division (CATS)
Awards received	Percent of district, regional, state and National awards received of the number of vocational education students	Local School Division (CATS)
Lowest quartile 11th grade test*	Percent of students (in the school at least two years) in the lowest quartile on the complete composite Tests of Achievement and Proficiency (reading comprehension, mathematics, written expression, and sources of information)	DOE, Division of Research and Testing
Indicators to be added		
Post-graduation status	Percent of graduating students not attending college full or part time in an academic major who are employed in an area related to preparation, in the military, or enrolled in postsecondary technical training or apprenticeship	Followup survey
Continuing Education	Percent of vocational education completers enrolled in further education within one year of graduation	Followup survey

Indicators to be considered
Employers' perceptions of preparation for employment
Students' perceptions of preparation for employment

*Data are currently available
**Modification is needed in currently available data

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OBJECTIVE: Increasing the Graduation Rate

Indicators for 1990-91	**Definition**	**Source of Data**
Literacy Passport first time pass rate*	Percent of 6th grade students (in the division at least two years) passing all three Literacy Passport tests, of total number of students taking the tests	DOE, Division of Research and Testing
Dropout rate*	Percent of 7-12th grade students not returning to any school in the fall or who do not complete the year	DOE, MIS
Minority dropout rate*	Percent of 7-12th grade Black, Hispanic and American Indian students not returning to any school in the fall or who do not complete the year	DOE, MIS
Absenteeism	Percent of students with 20 or more days of unexcused absences	Local School Division (CATS)
Lowest quartile 4th grade tests*	Percent scoring in the lowest quartile, based on the complete composite of the Iowa Tests of Basic Skills	DOE, Division of Research and Testing
Lowest quartile 8th grade tests*	Percent scoring in the lowest quartile, based on the complete composite of the Iowa Tests of Basic Skills	DOE, Division of Research and Testing
Over age students in 4th grade*	Percent of 4th grade students 11 or more years old	DOE, Division of Research and Testing
Over age students in 8th grade*	Percent of 8th grade students 15 or more years old	DOE, Division of Research and Testing
Indicators to be added		
Graduation rate for first time Literacy Passport failures	Percent of students failing the Literacy Passport tests in 6th grade who graduated from high school, of students failing one or more of the Literacy Passport tests in 6th grade (excluding transfers)	DOE, Division of Research and Testing or Local School Division
Literacy Passport two year pass rate*	Percent of students failing a Literacy Passport test in the 6th grade who passed within 2 years	DOE, Division of Research and Testing
Graduation rate for lowest quartile 8th graders	Percent of students in the lowest quartile of the 8th grade Iowa Tests Basic Skills, based on the complete composite, who graduated from high school, of the students in the lowest quartile of the 8th grade Iowa Tests of Basic Skills (excluding transfers)	DOE, Division of Research and Testing or Local School Division

Indicators to be considered

Self-concept

Attitudes toward school and learning

*Data are or will be available

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OBJECTIVE: Increasing Special Education Students' Living Skills & Opportunities

Indicators for 1990-91	Definition	Source
Average daily attendance	Ratio of average daily attendance of all special education students to average daily attendance of regular students	Local School Division (CATS)
Absenteeism	Percent of all special education students absent for 10 or more days for the year	Local School Division (CATS)
Dropout rate	Percent of all special education students, grades 7 and up, not returning to school for the next grade or dropping out of school during the year	Local School Division (CATS)
Receiving Advanced Studies Diploma	Percent of hard of hearing, deaf, speech or language impaired, visually handicapped, orthopedically impaired, LD and ED special education graduates receiving the Advanced Studies Diploma	Local School Division (CATS)
Taking Literacy Passport tests	Percent of hard of hearing, deaf, speech or language impaired, visually handicapped, orthopedically impaired, LD and ED sixth grade special education students taking the Literacy Passport tests	Local School Division (CATS)
Literacy Passport first time pass rate	Percent of sixth grade special education students passing all three of the Literacy Passport tests, of those special education students taking it	Local School Division (CATS)
Indicators to be added		
Above median on standardized tests**	Percent of special education students (in the school at least two years) scoring above the median on the 4th and 8th grade Iowa Tests of Basic Skills and 11th grade Tests of Achievement and Proficiency complete composites, of special education students taking the tests under standard conditions	DOE, Division of Research and Testing
Taking standardized tests	Percent of special education students taking 4th, 8th and 11th grade tests under standard conditions	DOE, Division of Research and Testing
Literacy Passport pass rate of 6th grade failures	Percent of special education students failing the 6th grade Literacy Passport tests, of those special education students taking it	Local School Division (CATS)
Successful employment or postsecondary education	Percent of special education student graduates or dropouts who are successfully employed or enrolled part or full time in postsecondary education within one year of leaving school	Followup survey

Indicators to be considered
Self-concept
Independent living skills
Social skills

**Data are currently available.

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OBJECTIVE: Educating Elementary School Students

Indicators for 1990-91	Definition	Source
Above median 4th grade tests*	Percent of students (who attended at least 2nd and 3rd grades in the school) scoring above the median on the complete composite of the 4th grade Iowa Tests of Basic Skills (complete composite includes vocabulary, reading comprehension, total language, total work-study skills and total mathematics scores; social studies and science reported in diagnostic school-level report)	DOE, Division of Research and Testing
Absenteeism**	Percent of K-5 students absent more than ten days	Local School Division (CATS)
Literacy Passport first time pass rate*	Percent of 6th grade students (attending at least 4th and 5th grade in schools) passing all three Literacy Passport tests (reading, writing and mathematics), of total number of 6th grade students (attending at least 4th and 5th grade in schools)	DOE, Division of Research and Testing
Over age students in 4th grade**	Percent of 4th graders 11 or more years old (who attended at least 2nd and 3rd grades in the school) of the total number of 4th grade students (who attended at least 2nd and 3rd grades in the school)	DOE, MIS
Over age minority students in 4th grade	Percent of Black, Hispanic and American Indian 4th graders 11 or more years old (who attended at least 2nd and 3rd grades in the school) of the total number of 4th grade Black, Hispanic and American Indian students (who attended at least 2nd and 3rd grades in the school)	DOE, MIS
Physical fitness pass rate**	Percent of students in grades 4-5 passing all four spring physical fitness tests	DOE, Division of Sciences and Elementary Administration
Indicators to be added		
Scoring in lowest quartile of CogAT and above the 25th percentile on the Iowa Tests of Basic Skills	Percent of students scoring in the lowest quartile on any CogAT test who score above the 25th percentile on the complete composite of the 4th grade Iowa Tests of Basic Skills	DOE, Division of Research and Testing

Indicators to be considered

Self-concept
Attitudes toward school subjects and learning
Citizenship
Knowledge and appreciation for the arts

*Data are or will be available
**Modification is needed in currently available data

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OBJECTIVE: Educating Middle School Students

Indicators for 1990-91	Definition	Source
Literacy Passport two year pass rate*	Percent of students (in the school at least two years) who pass all three Literacy Passport tests by the end of grade 8	DOE, Division of Research and Testing
Absenteeism*	Percent of 6th, 7th and 8th grade students absent more than 10 days during the school year	Local School Division (CATS)
Taking foreign language*	Percent of 6th, 7th or 8th grade students taking a foreign language	DOE, MIS
Minorities taking foreign language	Percent of 6th, 7th or 8th grade Black, Hispanic and American Indian students taking a foreign language	DOE, MIS
Taking Algebra I*	Percent of 8th grade students taking Algebra I	DOE, MIS
Minorities taking Algebra I	Percent of 8th grade Black, Hispanic and American Indian students taking Algebra I	DOE, MIS
Upper quartile 8th grade tests*	Percent of 8th grade students (in the division at least two years) scoring in the upper quartile on the complete composite of the Iowa Tests of Basic Skills (includes vocabulary, reading comprehension, total language, total work-study skills, and total mathematics). (social studies and science tests reported in diagnostic school level report)	DOE, Division of Research and Testing
Above median 8th grade tests*	Percent of students (who have been in the school two or more years) who score above the median on the complete composite, social studies and science tests	DOE, Division of Research and Testing
Physical fitness pass rate	Percent of 6th, 7th and 8th grade students passing all four physical fitness tests in the spring of the year	DOE, Division of Sciences and Elementary Administration
Extracurricular involvement	Percent of 6th, 7th and 8th grade students who have participated in at least one school sponsored extracurricular activity during the year (e.g., sports, band, clubs, etc.)	Local School Division (CATS)
Indicators to be added		
Literacy Passport pass rate of 6th grade failures*	Percent of students failing one or more Literacy Passport tests in grade 6 who pass all failed tests by the end of the 8th grade	DOE, Division of Research and Testing
Scoring in lowest quartile of 4th grade Iowa Tests of Basic Skills and above the 25th percentile on grade 8 Iowa Tests of Basic Skills	Percent of students scoring in the lowest quartile on the 4th grade complete composite of the Iowa Tests of Basic Skills who subsequently score above the 25th percentile on the 8th grade complete composite of the Iowa Tests of Basic Skills	DOE, Division of Research and Testing

Indicators to be considered
Self-concept
Attitudes toward school subjects and learning
Citizenship
Appreciation of cultural diversity
Knowledge and appreciation of the arts

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OBJECTIVE: Educating Secondary School Students

Indicators for 1990-91	Definition	Source
Upper quartile 11th grade tests*	Percent of 11th graders (in the school at least two years) scoring in the upper quartile on the complete composite of the Tests of Achievement and Proficiency (includes reading comprehension, mathematics, written expression, sources of information, social studies and science)	DOE, Division of Research and Testing
Above median 11th grade tests*	Percent of 11th graders (in the school at least two years) scoring above the median on the complete composite of the Tests of Achievement and Proficiency	DOE, Division of Research and Testing
Graduates attending college or completing a vocational education program	Percent of students not attending college in an academic major either part or full time completing a vocational education program when leaving high school	Local School Division (CATS)
Absenteeism**	Percent of 9-12th grade students absent more than 20 days during the year	Local School Division (CATS)
Taking keyboarding or typing	Percent of 12th grade students who have completed a keyboard or typing class	Local School Division (CATS)
Receiving Advanced Studies Diploma*	Percent of graduating students receiving the Advanced Studies Diploma	DOE, MIS
Minorities receiving Advanced Studies Diploma	Percent of Black, Hispanic and American Indian students receiving the Advanced Studies Diploma, of the total number of Black, Hispanic and American Indian graduates	DOE, MIS
Extracurricular involvement	Percent of 9th, 10th, 11th and 12th grade students active in at least one school sponsored extracurricular activity (e.g., athletics, band, clubs)	Local School Division (CATS)
Dropout rate**	Percent of 9-12th grade students not returning to school in the fall or who do not complete the year (excluding transfers)	DOE, MIS
Minority dropout rate*	Percent of 9-12th grade Black, Hispanic and American Indian students not returning to school in the fall or who do not complete the year (excluding transfers)	DOE, MIS
Physical fitness pass rate**	Percent of 9th and 10th grade students passing all four spring physical fitness tests	DOE, Division of Sciences and Elementary Administration
Indicators to be added		
Attending postsecondary education, the military, or obtaining employment	Percent of high school graduates attending postsecondary education full or part time, entering the military, or successfully employed, within one year of graduation	Followup survey

Indicators to be considered

Self-concept
Citizenship
Appreciation of cultural diversity
Knowledge and appreciation of the arts

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*Data are currently available

Appendix D

Educational Trends

Educational Trends

Expanding education and training throughout society

Democrats, as well as many Republicans, advocate greater federal spending for education. An annual $5-billion increase in federal spending is needed for programs such as the Head Start preschool program, federal aid for disadvantaged children, Jobs Corps, and the Job Training Partnership Act.

The half-life of an engineer's knowledge today is five years.

In 10 years, 90% of what an engineer knows will be computer-related.

Eighty-five percent of the information on National Institutes of Health computers is upgraded every five years.

The rapidly changing job market, along with the changing requirements of new technologies, will necessitate increased training across the board. Up to 4% of the labor force will be in job retraining programs by the 1990s.

Because of fundamental changes in the economy, there will be fewer and fewer well-paying jobs not requiring advanced training.

Close to 6 million jobs will open up in the next decade in highly skilled occupations - executive, professional, and technical.

Schools will be used to train both children and adults. The academic day will be lengthened to seven hours for children; adults will work a 32-hour work week and prepare for their next job in the remaining hours.

State, local, and private agencies could play a greater role in training by offering internships, apprenticeships, pre-employment training, and adult education.

Professional alliances between high school and college faculties will grow.

New technologies will greatly facilitate the training process

Job simulation stations - modules that combine computers, videodiscs, and instrumentation to duplicate work environments - will be commonly used in training.

Computer models will aid in the training of medical personnel and will provide alternate choices in diagnosis and treatment of patients in the future.

Telecommunications will allow coursework to be shared with another school district or students in another state or country, opening up new vistas in education.

Education will become more individualized as new media such as interactive computers and videodiscs permit students to learn according to their needs and abilities.

Personal computers with ultra-high-resolution screens, 3-D graphics, high-level interactivity, and artificial intelligence will enhance the gaming and simulations used in education and training.

Greater role of business in training and education

More businesses will be involved in schools, job-training programs, and community source programs. The investment of corporations in employee education and retraining - now some $80 billion a year - will double by 2001. And the Job Training Partnership Act allows greater communication between those who need jobs and those who need workers by calling on private business to help direct the training of unemployed workers.

One-half of all funding for formal training will come from 200-300 large companies in business and industry; however, most new jobs will be generated by small businesses that cannot afford to pay for training.

Education costs will continue to rise

Heavy pressure to control costs will emerge.

Two-year colleges and associate degrees will grow.

Loans rather than grants will constitute the main source of student financial aid.

Educational institutions will be more concerned with ways to assess outcomes and effectiveness of educational programs

Greater emphasis will be placed by the public and the legislatures on the outcomes of public education.

Faculty will support efforts to assess their classroom performance and effectiveness.

Improved pedagogy - the science of teaching - will revolutionize learning

Institutions will increasingly apply the growing knowledge about individual cognition to educational situations.

The learning environment will not be as important in the future. Individuals will learn more on their own, the "places" of learning will be more dispersed, and the age at which things are learned will depend on the individual, not on tradition.

Computer-supported approaches to learning will improve learning techniques and will allow a greater amount of material to be learned. Overall learning time may be reduced by one-sixth.

Alternative testing approaches will be widely used for better feedback.

Universities will stress development of the whole student and how the university's total environment affects that development

Faculty will receive greater support from the administration for class-related activities.

Individual students will receive more support from faculty and advisors on decisions about academic programs and career paths.

Reduction in size of higher education institutions

Private commercial ventures will establish themselves as the proprietors of large electronic databases, eventually replacing the university library.

Students will adopt the "scholarship" mode of learning: They will learn by consulting books, journals, etc., as the professors and Ph.D. candidates do today.

College and university instructors will find employment at secondary schools, in business-based education programs, and in producing education electronic software.

More and more businesses are conducting research for themselves, rather than turning to universities.

Taken from "Into the 21st Century: Long-Term Trends Affecting the United States," a special report from the World Future Society, prepared by Marvin J. Cetron, Wanda Rocha, and Rebecca Lucken of Forecasting International, Ltd.

Appendix E

AEL Needs Statements

Appalachia Educational Laboratory
1989 Needs Assessment Project

NEED STATEMENTS

1. We need to study the use of technology as a means for improving the delivery of instruction to all children.
2. We need programs that address the special needs of small, rural schools.
3. We need improved financial support for local schools.
4. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.
5. We need special programs for at-risk youth in danger of dropping out of school.
6. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.
7. We need programs to improve the care and education of preschool children.
8. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.
9. We need more community support of local public schools.
10. We need to improve professional development programs for teachers and school administrators.
11. We need to improve the recruitment of highly talented individuals into the teaching profession.
12. We need to provide programs to address the special needs of minority students and community members.
13. We need programs to improve students' higher order thinking skills.
14. We need programs that address the special needs of urban schools.
15. We need to improve instructional programming for middle school-age students.
16. We need to improve programs that enhance secondary students' motivation to learn.

17. We need to enhance the involvement of the state's higher education community in the improvement of local schools.

18. We need educational reforms at both the state and local levels.

19. We need to improve career education programming/career guidance services.

20. We need to improve the involvement of parents/guardians in the education of their school-age children.

21. We need programs to enhance the functioning of local boards of education.

22. We need to improve vocational education.

23. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).

24. We need to improve sex education programming in K-12 schools.

25. We need to improve teachers' working conditions.

26. We need to improve students' mastery of basic skills.

27. We need to improve school facilities to ensure the delivery of quality education to all children.

28. We need programs that provide care for the children of public school students.

29. We need to improve educational services for all exceptional students.

30. We need programs to improve adult literacy.

Appendix J
WV State Report

EDUCATION IN WEST VIRGINIA: A STATUS REPORT

Karen Nicholson, Ph.D.

September 1989

Prepared For

Appalachia Educational Laboratory
Post Office Box 1348
Charleston, West Virginia 25325

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INTRODUCTION

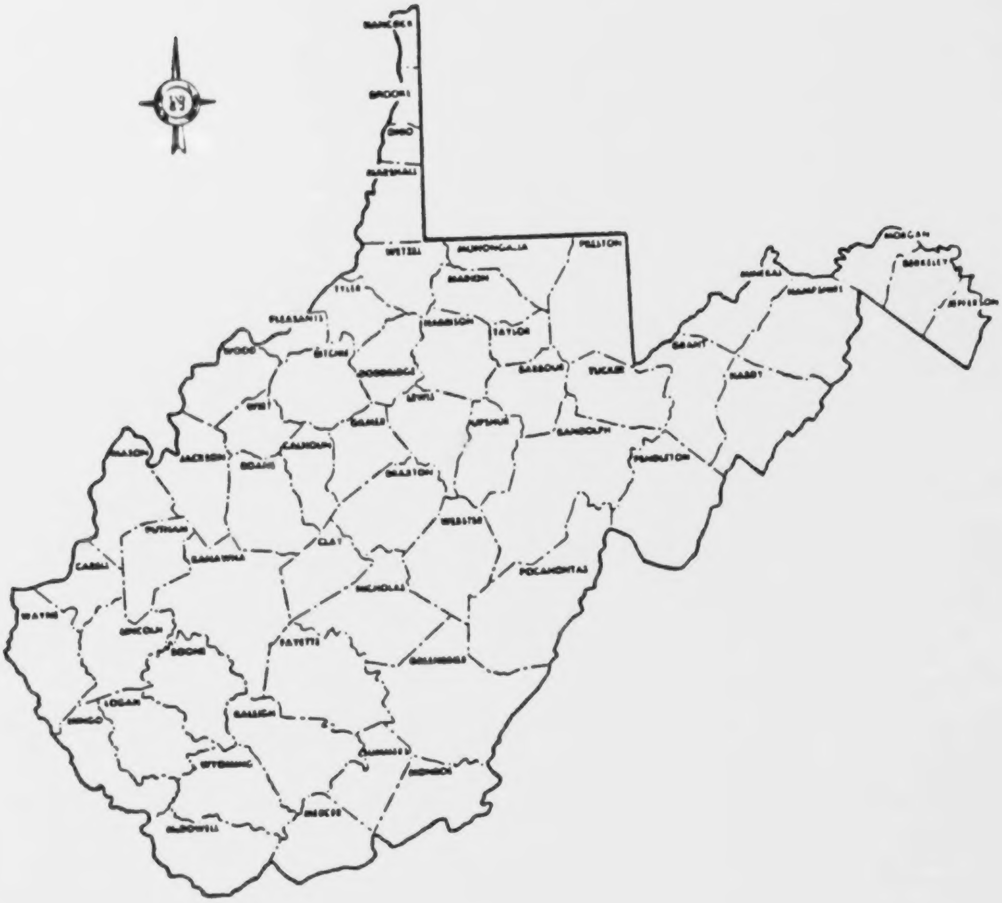
This report on the status of education in West Virginia was prepared for the Appalachia Educational Laboratory (AEL) in Charleston, West Virginia. The report is divided into six areas intended to provide a profile of public education and a description of the cultural, social, political, and economic conditions impacting the quality of schools in the state. The report includes information on (1) general demography, (2) educational demography, (3) support and control of public elementary and secondary education, (4) role of higher education in public elementary and secondary education, (5) trends in public elementary and secondary education, and (6) R & D resources available to support elementary and secondary education. My thanks to the AEL Board of Directors from West Virginia who provided their views and insights on educational needs within the state and the state's current readiness and ability to address the needs, to Senator Sondra Lucht for her time in sharing information on legislation impacting education, to Dallas Blankenship with Cabell County Schools for discussing the effect early retirement legislation has had to date in his county, and to Charles Duffy for discussions related to the operation of Regional Education Service Agencies (RESAs).

The structure, governance, delivery, and finance of public education in West Virginia is based primarily on the county as the unit of operation. There are 55 counties, each with an independent system of education, responsible for providing the elementary, secondary, and some postsecondary and adult services to residents. In addition, there are eight RESAs, which have a multicounty mission to provide educational services within their geographic regions as defined by their Board of

Directors, the superintendents of the county school systems of that region. Until July 1989, the state-supported graduate institutions of higher education had a mandated, multicounty service region for teacher education. On July 1, 1989, the graduate institutions became part of a multicampus university system responsible for delivery of graduate services throughout the state. It is too early to determine how, or if, this new structure will relate to the prior use of geographic boundaries. Given this 55-county system of public education in West Virginia, most of the data in this report is based on this structure (see Figure 1).

Figure 1

Counties in West Virginia


HANCOCK
BROOKE
OHIO
MARSHALL
WETZEL
MONONGALIA
PRESTON
MORGAN
BERKELEY
MINERAL
HAMPSHIRE
JEFFERSON
MARION
TYLER
PLEASANTS
HARRISON
TAYLOR
WOOD
RITCHIE
DODDRIDGE
BARBOUR
TUCKER
GRANT
HARDY
WIRT
LEWIS
UPSHUR
GILMER
RANDOLPH
MASON
JACKSON
CALHOUN
ROANE
BRAXTON
PENDLETON
WEBSTER
PUTNAM
CLAY
KANAWHA
CABELL
POCAHONTAS
NICHOLAS
WAYNE
LINCOLN
FAYETTE
BOONE
GREENBRIER
LOGAN
MINGO
RALEIGH
SUMMERS
WYOMING
MONROE
MERCER
McDOWELL

GENERAL DEMOGRAPHY

Based on the U.S. Department of Commerce's 1980 census report (1980), the U.S. Bureau of the Census' County and city data book (1988), and the Council of Chief State School Officers' State education indicators (1988), the population of West Virginia has the following general social and economic characteristics. In 1986, West Virginia had a population of 1,919,000 for a -1.5% change from the 1980 census figure of 1,949,644 (see Table 1). During this same period, there was a 6.4% increase in population in the United States. Of West Virginia's total population, 1,349,020 reside in the rural areas (places of 2,500 or less people), while 569,980 reside in the urban areas (places of 2,500 or more people). Kanawha County had the largest population with 224,100, which was down from 231,414 in 1980. Cabell County was the second largest in population with 104,700 down from 106,835 in 1980. Nine counties--Calhoun, Doddridge, Gilmer, Hardy, Pendleton, Pleasants, Pocahontas, Tucker, and Wirt--had less than 10,000 residents, with Wirt County being the smallest with a population of 4,600 residents in 1986 down from 4,922 in 1980 (see Table 2). Eighteen of the 55 counties had no urban population areas in their county and were considered as total rural counties. The other 37 counties had one or more urban areas. West Virginia had an average population per square mile of 79.5 persons, with Ohio County having the most people with 547.2 per square mile and Pocahontas County having the fewest with 10.1. The Unites States Average was 68.1 persons per square mile according to the U.S. Bureau of the Census, 1988.

Of the total population, 1,847,229 people or 96.26% were classified as white and 71,771 as Black and other. There were 94.6 males per 100 females in the state (see Table 1). In 1985, there were 711,000 households in the state with the average size being 2.68. Of the 24,585 births in West Virginia in 1984, 17.7% or 4,351 were to mothers under 20 years old. U.S. comparisons show a white population of 85.11% with Black and others making up 14.89%. Nationally, there were 94.7 males for each 100 females. There was an 8.5% increase in the number of households nationally and they average 2.66 per household (see Table 2). Births to mothers under 20 was 13.1%.

The education levels attained by persons residing in West Virginia who are 18 years of age or older are reported according to the number of years of formal education completed. In 1980, 570,857 people had 0-11 years of school, 524,181 people had 4 years of high school, 163,018 people had 1-3 years of college, and 59,456 people had 5 years or more of college education (see Table 3).

In 1987, West Virginia had a per capita income of $11,020, which was second lowest in the nation. The national average was $15,481. In 1986, the civilian labor force totaled 743,000 with 88,000 individuals listed as unemployed. The 1986 unemployment rate in West Virginia was 11.8% compared to the U.S. average of 7.0%, with McDowell County having the highest unemployment at 24.5% and Jefferson the lowest at 3.8%. Private nonfarm employment for 1985 was 439,277 with an additional 88,163 employed in the retail trade, 101,742 in finance, insurance, and real estate, and 103,240 in service areas. Each employee averaged $17,801. There were 18,742 farms in West Virginia in 1982 with an average of per farm products sold averaging $12,919. Total farm earnings were down 17.2% in 1984. Of the 711,000 households, 515,066 obtained their income as wage earners, 47,717 from nonfarm business, and 14,937 from farming. Additionally, 227,553 obtained their income from social security and 61,844 from public assistance (U.S. Census, 1988).

In 1979, the median income was $14,564 per year with 5,230 households having income in excess of $75,000 per year and 111,021 households with incomes of $5,000 per year or less (see Table 4). West Virginia has a high percentage of families living below the poverty level. There are 43,140 families, with related children at home, that have incomes below the poverty level, plus an additional 15,545 families with female householder and no husband present that have incomes below the poverty level (see Table 3 and Table 5).

According to Ken Young's 1985 report on the status of education in West Virginia, "The nature of the work force in West Virginia is similar to that of the country as a whole." Young went on to project that West Virginia's business and industry will have to change more drastically than most other states in order to minimize its higher unemployment rate. Many individuals who lost employment in the automobile, steel, mining, textile, rubber, and railroad industries are continuing to seek other employment in these industries or are seeking retraining to enter other positions. West Virginia is currently attempting to attract technology-related industries particularly related to the computer industry and to develop state tourism to provide employment opportunities.

The Private Industry Council of West Virginia, as shown by Table 6, projects that many of the traditional occupations, such as sales clerk, janitor, food worker, and nurse, offer excellent employment opportunities. Table 7 also shows that the new and emerging occupations or skills are primarily in specialized service or technology areas (see Tables 8 and 9). Since 1985, all teacher training programs in the state have indicated an increase in the number of adults entering the program to receive certification. Two groups of these adults can be directly attributed to the displacements by industry. Individuals with a bachelor's, master's, or even in several instances a doctorate who can't find employment in their field return to complete requirements for certification to teach; or individuals with technical training who enter college to complete a teacher training program.

The state needs to implement an effective program of technical and career education to assist residents in preparing for the changing workplace. As stated in the Carnegie Report (1989), "We find it distressing that in a state where trained manpower is so crucial, work-related programs--at both the school and college levels--are uneven and not sufficiently effective." The report goes on to urge a coordinated system of community colleges to serve these needs. This is consistent with recommendations coming from the 1988 Department of Education's Plan for the redesign and refocus of vocational, technical and adult education in West Virginia. This plan recognized public education's responsibility for training adults and focuses on three challenges: (1) continuing and rapid technological change, (2) increasing change in the characteristics of the work force, and (3) supporting the economic stability of individual citizens and the state.

EDUCATIONAL DEMOGRAPHY

West Virginia public schools are organized into 55 county systems that had a 1986-87 student enrollment of 346,440. At the time this data was reported, different school systems used various programmatic configurations for reporting data. For simplicity in presenting figures, the eighth grade figures, for example, have been combined whether it was reported as part of an elementary, junior high school, or high school program. Of the 346,440 students enrolled in public schools in 1986-87, 26,109 were enrolled in prekindergarten or kindergarten, 168,350 were in grades 1-6, 86,318 were enrolled in grades 7-9, and 78,336 were enrolled in grades 10-12 (see Table 10).

Eighty-four students were identified as nongraded. The total number of public school graduates for 1986-87 was 22,401 with nonpublic high schools graduating 784 students (see Tables 11, 12, and 13). Net enrollments for 1987-88 and 1988-89 showed a decrease with enrollments at 333,962 and 326,356. Data is not available on programmatic enrollments (see Table 14).

There were 796 public elementary schools in use at the beginning of the 1986-87 school term and 309 secondary schools.

There were 197 nonpublic schools with a 1986-87 enrollment of 13,787. Church-related schools had a net elementary enrollment of 8,662 students and secondary enrollment of 3,240 students during 1986-87 (see Tables 15 and 16). Other private schools had a net enrollment of 1,885, including 1,524 elementary students and 361 secondary students (see Table 16). Church-related schools graduated 712 students and other private schools graduated 72 in 1986-87 (see Tables 12 and 13).

As was true in the general population data, the public school enrollment in the state has several extremes. Kanawha County had a net enrollment for 1988-89 of 34,244 students, while Wirt County had 1,037. There were seven county school districts with net enrollments ranging from 10,000-16,000 students and 28 county school districts with less than 5,000 students enrolled. Of those 28 small districts, 10 had less than 2,000 students enrolled (see Table 14). In 1988-89, there were 53,468 special education students in public elementary and secondary schools (see Table 14). This total equates to 14% of the total school-age population receiving special education.

According to Schools in crisis, as reported from 1987-88 data from the West Virginia Department of Education, there is a higher percentage of exceptional students identified in the 25 most sparsely populated counties than in the other 30 counties. Nineteen of the 25 sparsely populated counties have a rate higher than the state average of 17.30%. Several suggestions were made as to why this may be occurring. One is that these counties with less students are doing a more thorough job of identifying students who meet the guidelines for exceptionality. Another suggestion is that families in sparsely populated counties are poorer than others in the state. It has been documented that poverty is a dominant cause of increased incidence of handicapping conditions. The 25 sparsely populated counties have more poverty, larger families, a lower level of education among adults, and a higher percentage of exceptional students than the other 30 counties (Special Task Force, 1989).

Hazi (1989) reported that there were 22,676 teachers employed in the state in 1986-87 with 71% being female. Sixty-four percent of these teachers had 11 or more years of experience, 44% were in their 30s, and 55% have a Master's degree. The average beginning salary in the state was $15,055 with an average salary of $21,904, which ranks 49th among states. The average teacher salary for 1987 was $21,446 and for 1988 an estimated $21,736, which ranked 45th in the nation (see Table 17).

Data from the State Department of Education related to supply and demand of educational personnel indicate that West Virginia is experiencing a shortage of teachers, particularly in the areas of special education. Retirement and teachers leaving the state have hurt the supply of teachers in West Virginia. It is anticipated that the 1988-89 legislation, which offered incentives for early retirement, will have a significant impact on the availability of teachers. In 1987-88, there were 1,347 nonreturning professionals, in 1988-89 there were 2,054, and it is estimated that the number will be in excess of 3,000 for 1989-90. The two most frequent reasons for not returning are leaving the state and retirement. The number of persons retiring went from 287 in 1987-88 to 751 in 1988-89 and is expected to be even larger in 1989-90 (see Table 18).

According to discussions with several administrators, the impact of the 1988-89 legislation, which provided early retirement incentives, is being felt at every level from central office and building administrators to service personnel. In one RESA region, five of the eight county superintendents are in new districts for the 1989-90 academic year. In Cabell County, 21 of their 26 elementary schools will have principals who are new to the school, with 12 being in their first administrative assignment. There was an increase in teacher retirements from an average of 60 to 120 attributed in part to the early retirement incentives. For counties that can attract talented personnel, this is a unique opportunity to promote and transfer within the system, providing for increased job satisfaction and improved morale. On the other hand, for counties that have difficulty attracting professionals to the area or that have to compete with surrounding states with much higher salaries, it is a challenge to get positions staffed for the school year. Most counties continue to have difficulty staffing special education positions. Whether a particular county is viewing the large numbers of retirements positively or not, there has been a large amount of staff time required to interview and fill positions and to provide staff development training.

West Virginia's third graders scored above the national average of 50 on the Comprehensive Test of Basic Skills for 1986-87 on all subareas with the exception of science, where they received a mean percentile of 46. The other subareas with mean percentile include reading 61, language 72, math 54, basic skills 65, and social studies 70. The sixth graders scored above the national average on all subareas. Their mean percentile scores were reading 58, language 62, math 66, basic skills 62, science 61, and social studies 60. Ninth graders were below the national average in reading with a 49 and science with a 48; their other subareas were language 55, math 54, basic skills 51, and social studies 57. Eleventh graders were above the national average in all subareas with reading at 53, language 59, math 59, basic skills 58, science 51, and social studies 60 (WVDE, 1987).

In terms of school achievement and performance, students in West Virginia are also compared with students in other states. On the ACT scores for 28 states reporting, students from West Virginia ranked 26th in 1988 with an average score of 17.6. On the percentage of students graduating from high school, West Virginia ranked 21th in 1987, up from 23rd in 1986, among the 51 states reporting (see Table 19).

Some National Comparisons (U.S. Bureau of the Census, 1988)

- West Virginia's total population decreased from 1,948,000 to 1,919,000 between 1982 and 1986. During the period 1982-87, the percentage of school-age population decreased from 20.4% to 19.7% of the total population. Nationally, the school-age population decreased from 19.7% to 18.6% of the total population.
- In 1970, the percent of persons age 5-17 in households below the poverty line was 24.3%; the percentage decreased 6.4% by 1980 when 17.9% were below the poverty line. Nationally during the same period, the figure went from 25.7% to 20.7%.
- In West Virginia, the percentage of those age 5-17 below the poverty line were 4.3% minority and 95.7% white. The national figures are 22.6% minority and 77.4% white.
- Fifty-six percent of adults in West Virginia have completed four years of high school compared with 66.5% nationally.
- West Virginia had a 1988 pupil-to-classroom teacher ratio of 15.18 compared to a U.S. average of 17.61.

Higher Education Institutions

On July 1, 1989, the West Virginia system of higher education was restructured with the governing of the higher education institutions in the system being divided between two boards. The Board of Trustees assumed responsibility for the newly created multicampus system of the University of West Virginia. This included Marshall University, Parkersburg Community College, Potomac State College, School of Osteopathic Medicine, West Virginia College of Graduate Studies, and West Virginia University. The remaining institutions are to be governed by a Board of Directors and include Bluefield State College, Concord College, Fairmont State College, Glenville State College, Shepherd College, West Liberty

State College, West Virginia Institute of Technology, West Virginia State College, Southern West Virginia Community College, and West Virginia Northern Community College (see Figure 2). The private institutions include Alderson-Broaddus College, Appalachian Bible College, Bethany College, Davis and Elkins College, Ohio Valley College, Salem College, University of Charleston, West Virginia Wesleyan College, Wheeling College, and Beckley College.

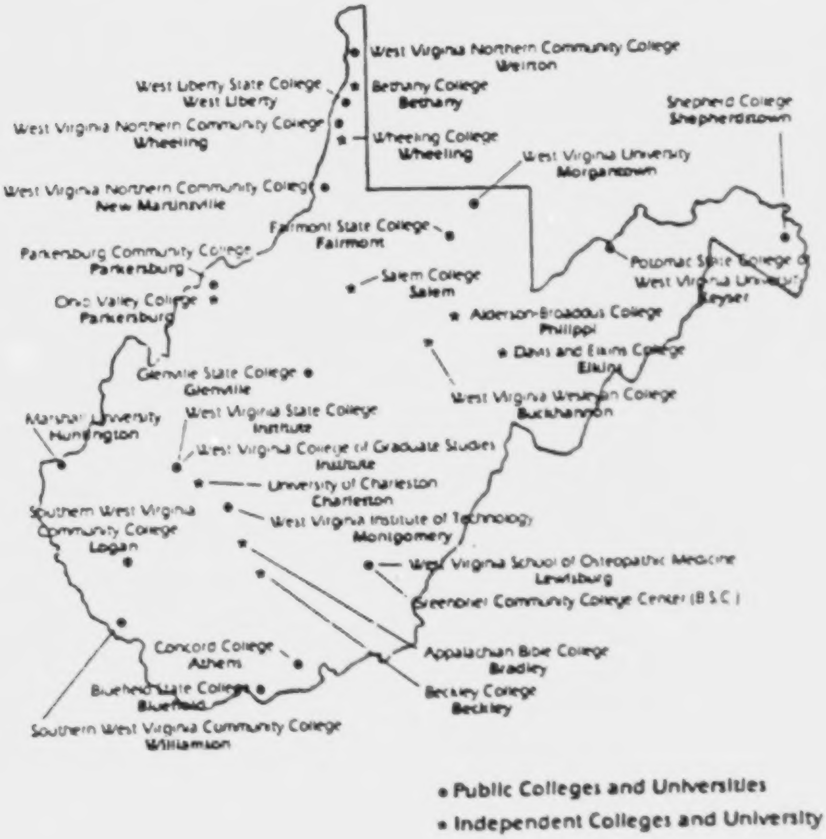
Each of the private institutions of higher education operates within the framework established by their respective governing boards. There are formal linkages to the boards of public institutions through the Advisory Council of Private College Presidents and through other advisory structures such as the Board of Regents Teacher Education Advisory Committee.

Public Higher Education in West Virginia: Highlights for 1986-88 (WVBOR, 1989)

- Total credit headcount increased from 67,079 in 1986 to 70,383 in 1988 for a .05% increase.
- Fulltime students increased from 62.8% to 64.9% of the total headcount.
- In-state enrollment for 1986 was 82.9% compared to 80.3% in 1988. Out-of-state enrollment changed proportionally.
- The ratio of males and females remained relatively constant with males representing 44.5% in 1986 and 44.6% in 1988.
- Enrollment increased at universities, four-year colleges, and community colleges from 1986 to 1988. University enrollment went from 42.6% to 44.2%, four-year colleges from 34.0% to 38.1%, and community colleges from 11.2% to 12.2%.
- The largest distribution of students are in the 18-22 age range, representing 53.1% of the student population.
- The average age of students in 1986 was 25.7 and in 1988 was 24.9.
- Total degrees awarded in 1986 were 10,871 and declined to 10,149 in 1988.

Figure 2

Higher Education Institutions in West Virginia


West Virginia Northern Community College
Weirton
West Liberty State College
West Liberty
Bethany College
Bethany
West Virginia Northern Community College
Wheeling
Wheeling College
Wheeling
Shepherd College
Shepherdstown
West Virginia University
Morgantown
West Virginia Northern Community College
New Martinsville
Fairmont State College
Fairmont
Parkersburg Community College
Parkersburg
Potomac State College of West Virginia University
Keyser
Salem College
Salem
Ohio Valley College
Parkersburg
Alderson-Broaddus College
Philippi
Davis and Elkins College
Elkins
Glenville State College
Glenville
West Virginia Wesleyan College
Buckhannon
Marshall University
Huntington
West Virginia State College
Institute
West Virginia College of Graduate Studies
Institute
University of Charleston
Charleston
Southern West Virginia
Community College
Logan
West Virginia Institute of Technology
Montgomery
West Virginia School of Osteopathic Medicine
Lewisburg
Greenbrier Community College Center (B.S.C.)
Concord College
Athens
Appalachian Bible College
Bradley
Bluefield State College
Bluefield
Beckley College
Beckley
Southern West Virginia Community College
Williamson
● Public Colleges and Universities
★ Independent Colleges and University

- In 1986, 19.2% of the degrees awarded were in education compared to 20.3% in 1988.
- West Virginia ranks 15th out of the 15 Southern Regional Education Board (SREB) states in terms of faculty salary at all academic ranks.
- Three thousand three hundred and twenty-two faculty were employed fulltime by the West Virginia Board of Regents in 1988-89.
- Graduate and professional school opportunities for West Virginia students continued to be augmented through contractual arrangements with other states and through the SREB's Academic Common Market program, serving West Virginia students in out-of-state programs not available in West Virginia.
- Over $25 million in federal aid and other grants have been received for economic development activities.
- Four research and development centers have been established to focus on technical assistance, applied technology projects, and education and training programs for the employer community.
- West Virginia ranks 21st among the 50 states, and 6th among the 15 SREB states, in the number of its public institutions per capita, and averages one public institution of higher education for each 121,853 persons in the state.

SUPPORT AND CONTROL OF PUBLIC ELEMENTARY/SECONDARY EDUCATION

The state superintendent of schools is charged with maintaining a Department of Education for implementing the school laws of West Virginia. The State Board of Education, known as the West Virginia Board of Education, consists of 11 members, nine of whom are citizens of the state appointed by the governor, by and with the advice and consent of the senate, for overlapping terms of nine years. The state superintendent of schools and, until July 1, 1989, the chancellor of the Board of Regents serve as ex officio members of the Board of Education. Since there are now two governing boards for higher education, it is unclear whether both chancellors will serve as ex officio members of the Board of Education. At least two, but not more than three, members are appointed from each congressional district. No more than five of the nine appointive members belong to the same political party, and no person is eligible for appointment to membership on the state board who is a member of any political party executive committee or holds any other public office of public employment under the federal or state governments. Subject to and in conformity with the constitution and laws of the state, the Board of Education determines the educational policies of the state.

The board is empowered to make rules for carrying into effect the laws and policies of the state relating to education. The Board of Education serves as the State Board of Vocational Education. The state superintendent of schools is the chief executive officer of the Board of Education; the Board of Vocational Education appoints a director who administers the Division of Vocational Rehabilitation independently of the state superintendent of schools. All powers, duties, and authorities that the Board of Education had with respect to state colleges and universities prior to July 1, 1969, were transferred to the West Virginia Board of Regents, but the standards for the education of teachers and teacher preparation programs at the state colleges and universities continue to be under the general direction and control of the Board of Education.

The state superintendent of schools is appointed by the State Board of Education and serves at its will and pleasure. The superintendent has general supervision of the free schools of the state and is chief executive officer and ex officio member of the Board of Education. The superintendent is charged with the general supervision of all county superintendents and county boards of education (The Michie Co., 1984).

The West Virginia Department of Education is organized into three major bureaus with responsibilities assigned by the state superintendent to three assistant state superintendents (see Figure 3).

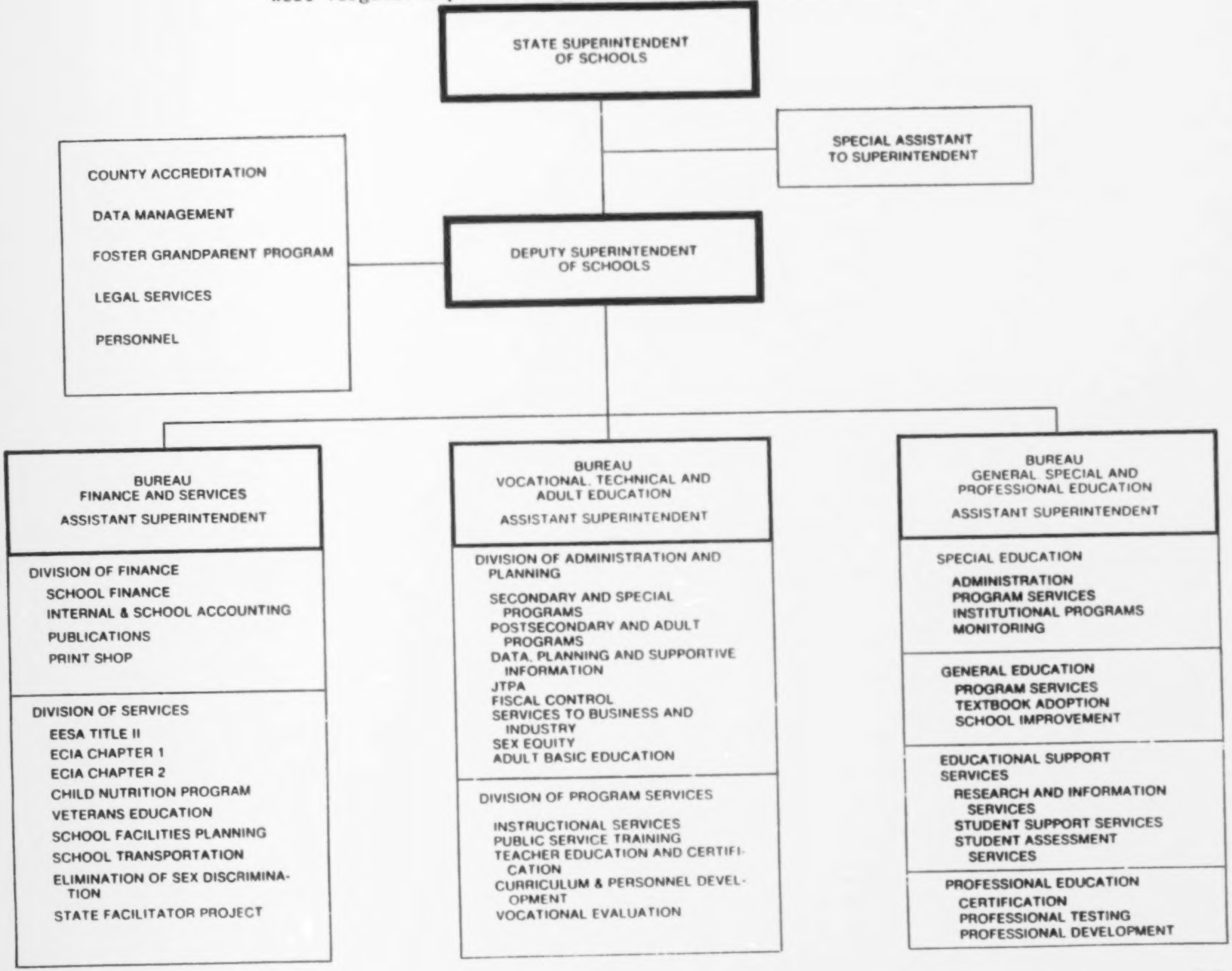
Local Education Agencies

According to the West Virginia Code, each county school district shall be under the supervision and control of a county board of education, which shall be composed of five members, nominated and elected by the voters of the respective county for terms of five and one-half years. A county board of education is a corporation created by the legislature and has only such powers as conferred upon it by statute to carry out the direction of the state board and all its educational policies.

The county superintendent shall be elected by the county board to serve for a term of not less than one year, nor more than four, without

Figur

West Virginia Department of Education Organizational Chart


STATE SUPERINTENDENT OF SCHOOLS
SPECIAL ASSISTANT TO SUPERINTENDENT
COUNTY ACCREDITATION
DATA MANAGEMENT
FOSTER GRANDPARENT PROGRAM
LEGAL SERVICES
PERSONNEL
DEPUTY SUPERINTENDENT OF SCHOOLS
BUREAU FINANCE AND SERVICES
ASSISTANT SUPERINTENDENT
DIVISION OF FINANCE
SCHOOL FINANCE
INTERNAL & SCHOOL ACCOUNTING
PUBLICATIONS
PRINT SHOP
DIVISION OF SERVICES
EESA TITLE II
ECIA CHAPTER 1
ECIA CHAPTER 2
CHILD NUTRITION PROGRAM
VETERANS EDUCATION
SCHOOL FACILITIES PLANNING
SCHOOL TRANSPORTATION
ELIMINATION OF SEX DISCRIMINATION
STATE FACILITATOR PROJECT
BUREAU VOCATIONAL, TECHNICAL AND ADULT EDUCATION
ASSISTANT SUPERINTENDENT
DIVISION OF ADMINISTRATION AND PLANNING
SECONDARY AND SPECIAL PROGRAMS
POSTSECONDARY AND ADULT PROGRAMS
DATA, PLANNING AND SUPPORTIVE INFORMATION
JTPA
FISCAL CONTROL
SERVICES TO BUSINESS AND INDUSTRY
SEX EQUITY
ADULT BASIC EDUCATION
DIVISION OF PROGRAM SERVICES
INSTRUCTIONAL SERVICES
PUBLIC SERVICE TRAINING
TEACHER EDUCATION AND CERTIFICATION
CURRICULUM & PERSONNEL DEVELOPMENT
VOCATIONAL EVALUATION
BUREAU GENERAL, SPECIAL AND PROFESSIONAL EDUCATION
ASSISTANT SUPERINTENDENT
SPECIAL EDUCATION
ADMINISTRATION
PROGRAM SERVICES
INSTITUTIONAL PROGRAMS
MONITORING
GENERAL EDUCATION
PROGRAM SERVICES
TEXTBOOK ADOPTION
SCHOOL IMPROVEMENT
EDUCATIONAL SUPPORT SERVICES
RESEARCH AND INFORMATION SERVICES
STUDENT SUPPORT SERVICES
STUDENT ASSESSMENT SERVICES
PROFESSIONAL EDUCATION
CERTIFICATION
PROFESSIONAL TESTING
PROFESSIONAL DEVELOPMENT

reelection. The county superintendent shall act as the chief executive officer of the board to execute under the direction of the state board all of its educational policies. The county superintendent serves at the will and pleasure of the county board of education.

Intermediate Education Agencies

In 1972, the West Virginia Legislature enacted Senate Bill 183 and thereby authorized the West Virginia Board of Education to establish multicounty service agencies in order to consolidate and more effectively administer existing regional education programs and called them Regional Education Service Agencies (RESAs). The functions of these RESAs are primarily to provide educational services: administrative, curricular, media, and instructional. They are also responsible for assessing educational needs and for planning and developing multicounty programs. Eight RESAs were identified to serve the 55 county school districts and a full-time director was employed for each RESA (see Figure 4). During the 1988 legislative session, Senate Bill 14 and House Bills 2325 and 2326 were enacted with the potential for expanding the roles of the different RESAs. The new legislation does not provide a mandate to change or expand their missions or structure. When funding is provided through the state, the RESAs tend to have similar programs, but when the funding is coming from the individual counties within a RESA, the goals and focus of the RESA reflect the needs and philosophies of the Board of Director members within that region. One outcome of the legislation is that "Each Regional Education Service Agency shall conduct a study setting forth how the following services and functions may be performed by the agency for public schools and school districts within the region without terminating the employment

Figure 4

Regional Education Service Agencies

John O'Neal, Executive Director
Region I RESA
P.O. Box 426
MacArthur, WV 25873
255-1471

Ted Triplett, Executive Director
Region II RESA
1899 James River Rd.
Huntington, WV 25701
429-1328

Gary Sumpter, Executive Director
Region III RESA
200 Elizabeth St.
Charleston, WV 25311
348-7716

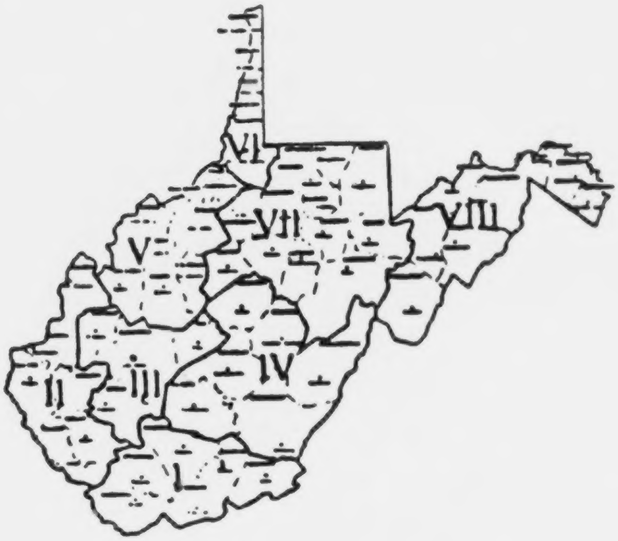
David Harmon, Executive Director
Region IV RESA
Nicholas Co. Bd. Annex
300 Main St.
Summersville, WV 26651
872-6440

Jim Lydon, Executive Director
Region V RESA
1210 13th St.
Parkersburg, WV 26101
485-6513

William Luff, Jr., Executive Director
Region VI RESA
30 G.C. & P. Rd.
Wheeling, WV 26003
233-26003

Ronald Dillenger, Executive Director
Region VII RESA
300 McLane Ave.
Morgantown, WV 26505
292-8641

Charles Duffy, Executive Director
Region VIII RESA
615 West King St.
Martinsburg, WV 25401
267-3595



of personnel employed by school districts prior to the effective date of this subsection: Accounting, purchasing, food service, transportation, delivery of high cost services to low incidence student populations, audiovisual material distribution, facilities planning, federal program coordination, personnel recruiting, and an integrated regional computer information system. On or before the tenth day of January, one thousand nine hundred ninety...."

The magnitude, timeframe, and timing of these studies is of some concern. To allow less than one year to complete studies of this magnitude, at a time when there is a disproportionate number of county superintendents new to their counties and therefore to the Board of Directors of a RESA as a result of the early retirement incentives, is creating some concern regarding the preparation of the studies. If the studies do show that some functions can be handled more efficiently at the regional level, the structure would seem to be in place with the potential for various initiatives from the regions.

Finance and Support of Public Schools

The finance and support of public schools in West Virginia has been designed to use the fiscal resources of both the state and counties in order to provide a standard level of educational opportunities throughout the state. As reported in StateEd (1989), in 1988 West Virginia spent 25.5% of the total state budget on public education. Of the total funds expended on public schools, 27% was from the local county, 65% was from the state, and 8% was from the federal government. The per-pupil expenditure for public education in West Virginia in 1987 was $3,784, which ranked 27th with the national average at $3,977 (see Table 17).

According to the report of the West Virginia Blue Ribbon Commission on School Finance (1988), the major portion of the state aid for current operation of schools is allocated to the individual county school districts in an inverse relationship to the counties' fiscal capabilities to support a system of public schools. The intent is to equalize the fiscal resources per pupil among the counties and is entitled the West Virginia Basic Foundation program. Since 1982 when the state's system of public school financing was ruled unconstitutional because of disparities in educational opportunity and differences in quality of school facilities in the 55 counties, the West Virginia Legislature has attempted to comply with the ruling. There is now a Master Plan for Educational Excellence in place; a statewide monitoring system of educational standards is operating and all counties have participated in at least one county accreditation visit to determine if they are in compliance with State Board of Education Policy 2510, which is the "framework" for delivering a thorough and efficient system of education as required by Recht and the Master Plan. In addition, a statewide property reappraisal effort was undertaken along with the Uniform School Funding Amendment. At this time, the property reappraisal has not gone into effect nor have the voters approved the Uniform School Funding Amendment. The inequities in funding that led to the ruling that the system for funding public schools in West Virginia was unconstitutional is still in place. Efforts to increase funding have not been successful and the educational reform being accomplished is the result of redistributing limited resources.

ROLE OF HIGHER EDUCATION IN PUBLIC ELEMENTARY/SECONDARY EDUCATION

By legislation, policy requirements, and professional obligation, higher education institutions are intricately involved with the system of public education. As stated in the Carnegie Report (1989), "The quality of higher education can rise no higher than the quality of the public schools." The report goes on to say that, "In strengthening West Virginia's schools, higher education has a crucial role to play." Higher education along with public school personnel are responsible for designing curriculum for future teachers, for providing inservice education, and for serving as models for future teachers. This view of the collaborative role of higher education and public schools for the preparation of teachers is in legislation and State Board Policy. The governance structure for teacher education says that the responsibility for the preparation of teachers "... shall be under the general direction and control of State Board of Education, which shall, through the state superintendent of schools, exercise supervisory control over teacher preparation programs in all institutions of higher education, including student teaching in public schools, in accordance with standards for program approval stated in writing by the board." In addition, public institutions are subject to the policies and guidelines of their governing board, as are private institutions.

State Board Policy 5202 defines the authorities of the Boards as: "The state code authorizes the West Virginia Board of Education to: (1) issue professional certificates, (2) issue other licenses for individuals who do not qualify for the professional certificate, and

(3) exercise supervisory control over teacher preparation programs through program approval and the establishment of standards" (18A-3-2, 18-2-6). It goes on to say, "The state code authorizes the West Virginia Board of Regents to make rules and regulations for the accreditation of all colleges, universities, and other institutions of higher education in the State" (18-26-13a).

In 1986, recognizing the joint responsibility for the teacher preparation units of institutions of higher education, the Board of Education and the Board of Regents set up two joint commissions to examine their respective roles. One commission was on certification and governance of teacher education and the other was on professional development. While the state superintendent is ex officio on the Board of Regents and the chancellor is ex officio on the Board of Education and the two boards hold joint sessions twice a year, the establishment of the joint commissions was the first time they had formally examined their respective roles in teacher education. As a result, each board is more sensitive to program and certification issues that have the potential to pull teacher education programs in two directions.

Preservice Preparation of Educational Personnel - Policy 5100

In April 1982, the West Virginia Board of Education formally approved "Policy 5100: Assuring the Quality of Learning in West Virginia Schools: Plan for Professional Development of Educational Personnel." The policy became effective during the fall semester 1985 and continues to provide the overall direction and parameters for the training of educational personnel within the state. Although there have been minor adjustments in the policy, including changing the name to "Approval of Educational

Personnel," the general thrust remains intact. As Tom McNeel, then superintendent of schools, stated in the foreward to the compilation of all documents related to the policy, the two guiding principles remain the same--the first being that the preparation of educational personnel is a shared responsibility. A variety of citizen and professional groups have been involved in the clarification and implementation of Policy 5100. The second principle is accountability. The issuance of a professional license under Policy 5100 implies that the individual "possesses the requisite entry level knowledge and skills appropriate to the grade level and specialization on the license."

While higher education personnel generally endorsed the policy, there have been concerns about the implementation. A major concern continues to be a lack of additional resources for implementing outcome assessment procedures. Other concerns have related to loss of curricular control, the focus on minimum and not high-level standards, and the lack of a comprehensive strategy for fully implementing the policy.

A major addition to Policy 5100 during 1988 was the establishment of National Council for Accreditation of Teacher Education (NCATE) accreditation of the Professional Education Unit as a condition of program approval. The impact of this change will not be fully felt for several years until all institutions have completed the NCATE process. At this time, one private institution completed the NCATE review under the new standards as a pilot school and received accreditation. One public school has gone through the process under the new standards and was not successful and will have two years to complete the process again. Given the changes in the NCATE process and the lack of data on the consistency of review teams, it may have been premature for a state to require all schools to undergo the process as a condition for state approval.

Certification patterns have been revised to conform with Board-adopted programmatic levels, i.e., early childhood (K-4), middle childhood (5-8), and adolescent education (9-12). Public school buildings rarely conform to these programmatic levels, which has necessitated multiple placements during the performance assessment (student teaching) stage of the teacher preparation program. One implication is that students do not have adequate time in each placement and it becomes very difficult to meet NCATE standards for length of placement. Another implication is that additional faculty time is required for placement and supervision without additional funding to institutions. Finally, new teachers are entering the schools with endorsements at programmatic levels that are not consistent with the way the schools are structured. Some continuing implications of Policy 5100 include:

- Certification patterns have been revised to conform with Board-adopted programmatic levels, i.e., early childhood, middle childhood, and adolescent education. The certification patterns under Policy 5100 require most prospective teachers to complete two specializations at one programmatic level or one specialization at two levels. In 1988 selected specializations were exempted from the two specialization or two programmatic level requirement. The exemptions included business education, marketing education, occupational home economics, vocational technical education, biological science, chemistry, and physics. In addition, institutions may petition the State Board for approval of additional exemptions to the requirements.

- With four years of institutional data available on Preprofessional Skills Test (PPST) results, the State Board of Education, the West Virginia Council on Professional Education, the Teacher Education Advisory Council, and institutions of higher education are attempting to make some decisions and recommendations. At a system level, the decisions relate to validity of the tests. One outcome was to eliminate the ACT Comp as a speaking assessment and put the responsibility for verifying this competency with the institutions. Another issue at the system level is whether there are already indicators available that would serve the same purpose. For example, are there ACT scores that have a high enough correlation that students would not need to take the PPST? Several advisory groups have recommended that students entering teacher preparation programs with an ACT Composite score of 25 or above be exempted from the PPST requirement. Are there scores on the ACT that are predictors of students' inability to successfully pass the PPST and complete a teacher education program? Institutional decisions are being made about institutional responsibility to provide remediation and whether it is the best service to public school students.

- While the content specialization tests are providing an assessment of the cognitive knowledge of students on a common instrument, there continues to be concern on the validity of the examinations. The advisory groups recommended that the State Board not change the cut score required for a passing score on the examinations until each exam has been reviewed. There continues to be concern that in low incidence areas such as physics there may never be an adequate sample to determine the effectiveness of the exam. Since the exam results are reported for the various subareas, it does provide higher education institutions with a means for examining their curricula to ensure that all competencies are addressed in their programs.

- The public school role in the preparation of educational personnel is continuing to evolve as a result of Policy 5100. While the policy mandates that public school personnel be part of the evaluation process, no funds have ever been provided for identifying, training, and adequately compensating these individuals. In addition, while institutions of higher education are mandated to include public school personnel, public schools are not mandated to participate and, in fact, have very little incentive except professional interest.

- A standardized instrument for the evaluation of the professional education component of the teacher preparation program was never developed and this has been left up to the institution with the understanding that the instrument must reflect all criteria defined by the state and competence must be jointly verified by the institution and the public school.

Role of Higher Education in Inservice Training

Several current policy initiatives have implications for the role of higher education in the continuing education and staff development of the inservice teacher.

Discussions have been occurring since 1984 on the need for a program for beginning teachers. Discussions have centered on the assumption that the beginning educator has needs different from those of more experienced professionals. During the summer of 1987, there was a statewide meeting on professional development for teachers held at Canaan Valley State Park. The meeting included representation from every group involved with the professional development of educators. One of the primary recommendations coming from this group was the need for a beginning educators program. In May 1988, the West Virginia Council on Professional Education strongly urged that counties establish organized and systematic programs for beginning educators utilizing broad guidelines that they suggested. During 1988-89, the West Virginia Council on Professional Education continued to hold discussions of the topic. With all this interest, it is somewhat surprising that there is still no systematic statewide program in place. One thing that had been missing was funding to design and implement a program. Two factors may now be in place that will encourage counties and institutions of higher education and possibly RESAs to work together to address this need: Senate Bill 14 included a provision on beginning teachers and the new NCATE standards require institutions of higher education to do followup of graduates.

Public Higher Education

In 1989, the West Virginia Legislature established the Board of Directors and the Board of Trustees as the governing structure for higher education in West Virginia, replacing the Board of Regents established in 1969. The Board of Trustees will oversee the newly created multicampus University of West Virginia, while the Board of Directors will supervise all other higher education institutions. While it might be assumed that the new boards responsible for overseeing higher education in West Virginia have similar responsibilities to the Board of Regents, it is not clear at this time. A new position was created by the 1989 legislature, that of secretary of education and the arts. This individual has a level of authority new to the system and not clear at this time.

Some powers and duties that may still be the responsibility of the governing boards include (WVBOR, 1985):

- accrediting nonpublic higher education institutions;
- operating the West Virginia Higher Education Grant program, through which eligible students receive financial assistance from federal and state funds;
- operating the West Virginia Network for Educational Telecomputing to provide statewide, coordinated computer services;
- operating the Center for Education and Research with Industry to provide assistance to business and industry through the college and university system;
- approving and supervising certain aspects of educational institutions in which veterans are provided financial support through the Veterans Administration;
- conducting a federally funded "Talent Search" program to assist economically and culturally disadvantaged West Virginians in obtaining higher education; and
- participating in the training and retraining of unemployed West Virginians through a grant provided under the Job Training Partnership Act.

While social and economic conditions suggest a need for increased education, West Virginia's population has not been taking advantage of higher educational opportunities to the same degree that people have in most other states. Of the 649,000 West Virginians age 25 and above who had completed high school by 1980, some 36.4% had some college experience. Approximately 10.5% of West Virginia's adult population has a college education, while the national average is 16.3%.

Data relating to West Virginia's high school youth indicate that secondary school graduates are not taking full advantage of college programs available to them. Of the 21,870 graduates of West Virginia's public high schools in 1985-86, 7,571 (33.7%) enrolled as first-time freshmen in the state's public and private colleges and universities in the fall of 1985. For 1986-87, 33.4% of the 23,185 graduates entered an in-state college. Even though the high school graduation rate is up, the college attendance rate has remained relatively constant.

The fact that West Virginia youth are not taking advantage of educational opportunities available to them has been a concern of both the Board of Education and the Board of Regents. One effort to address this joint concern occurred in July 1986 when the joint boards established the Joint Commission on College Attendance. After numerous meetings beginning in the fall of 1986, the Joint Commission recommended a media campaign on benefits of attending college, creating an ongoing reporting system to gauge the success of various efforts, and improved counseling services related to the college planning and placement process. They also recommended working with other agencies involved in the effort to improve the college-going rate, including the West Virginia Education Fund and the West Virginia College Presidents Association.

There have been major coordinated efforts to improve the college-going rate. One effort has been to inform the public of the advantage of postsecondary training and to provide opportunities for access to this training/education.

As stated earlier, the West Virginia Department of Education, in their document (1988) on redesign and refocus of vocational education, is attempting to provide access to opportunities for adults. The Carnegie Report (1989) addresses this access issue in their call for a "coordinated system of community colleges." They go on to recommend "that West Virginia community colleges coordinate their work with the state's vocational-technical centers..." The Carnegie Report's second priority was "to build a network of community colleges to increase higher education access and stimulate economic renewal in every section of the state." They identified this priority because the percentage of West Virginia high school graduates going to college is among the lowest in the nation. They found that 28% of the state's citizens age 25 and over have not completed ninth grade and only 10% have 4 or more years of college.

Efforts must continue to encourage students to continue their education. Opportunities must also be made available for upgrading training of underprepared adults for the changing employment market.

One example of a project directed at increasing the college-going rate is the Woodlands Mountain Institute in Franklin in Pendleton County. This project received a $200,000 grant to continue and expand the West Virginia Scholars Academy in 1988. The academy seeks to increase the college-going rate of students by helping the most promising students attend school and by training them to provide peer college counseling in their own high schools. The project, which reaches some 5,000 West Virginia students annually, is intended to address West Virginia's chronic problem of having one of the lowest college-going rates in the nation.

High School Graduation Requirements

Current graduation requirements include a total of 21 units, including 13 required units. The graduation requirements include:

English-Language Arts	4
1/2 unit speech allowed	
Social Studies	3
American History (1)	
World Culture (1)	
Economics (1/2)	
Contemporary America (1/2)	
Mathematics	2
Biology and other lab sciences	2
Physical Education	1
Health	1
Applied Arts, Fine or Performing Arts, or Foreign Language	
Electives	8
TOTAL	21

Graduation Requirements vs. Admission Requirements

Beginning in 1990, there will be preparatory requirements for admission to any four-year public college or university. Required units include four years of English including courses in grammar, composition, and literature; three years of social studies including U.S. history; two years of mathematics including algebra 1 and higher; and two years of laboratory science to be taken from biology, chemistry, physics, and other courses with a strong laboratory science orientation. There is a strong recommendation that students have two years of a foreign language and that elective units be chosen from computer science, fine arts, humanities, and typing.

These new requirements, intended for strengthening admission standards, have been widely distributed to high schools so schools have the opportunity to make necessary curricular adjustments and to counsel students regarding the new requirements.

Student Financial Assistance (see Table 10)

Financial aid continues to be an important dimension of higher education access during the 1980s. By 1985-86, undergraduate students enrolled in West Virginia's public and private colleges were receiving approximately $92,000,000 in various forms of financial assistance. While this appears to be a significant amount of funds devoted to student financial assistance, it is, in fact, not adequate to provide support for all students who qualify. The increased cost of tuition and other expenses associated with attending college have risen at a more rapid pace than the funding available for student financial assistance so the total number of student awards have decreased. In 1984-85, 6,765 students received financial assistance compared to an estimated 5,600 in 1988-89. At the same time that major efforts are taking place to encourage students to attend college, the number who can receive financial assistance is decreasing.

Two very positive student financial assistance programs were started in spring 1989 and in fall 1989. One of the programs was the Paul Douglas Teacher Scholarship program and is federally funded; the state equivalent is called the Underwood-Smith Teacher Scholarship program. These scholarships are targeted at encouraging the top high school graduates to enter teaching and have the potential to improve the public schools by improving the quality of individuals entering the classroom.

Expanding access to higher education for West Virginians will be influenced to a significant degree by both the total amounts and types of aid available. In 1985-86, over 23,000 students took out federal student loans totaling over $40,000,000. As Young (1985) said, undue reliance on student loans could negatively influence college access, especially among potential first-generation college students whose families are hesitant to incur large loan obligations to finance education programs about which they know very little. Increased debt levels could also have a strong influence on choice of educational programs and careers, and some students may shy away from public service fields and certain other occupations where the anticipated income level would not accommodate repayment obligations.

Since approximately 75% of the total undergraduate student financial assistance available in West Virginia comes from federally supported programs, it is clear that both funding and program design developments at this level will have a major impact on the extent to which available resources will meet demand. However, state-sponsored efforts in the student aid area will also be very important in ensuring access to economically needy West Virginians.

College Enrollment Opportunities for Gifted Students

Public colleges and universities have been providing college-level opportunities for gifted students for many years. The 1989 legislation related to gifted education opportunities for secondary level students may impact efforts by colleges and universities, but it is too early to tell. Some of the most frequently used mechanisms to provide opportunities for the gifted include:

- Early admission programs that enable academically well-qualified high school students (typically juniors and seniors) to enroll in a limited number of college courses. This would be done only with the concurrence of high school officials.

- In limited situations, high school students are permitted to enroll in college on a fulltime basis prior to secondary school graduation. Following the completion of a designated number of high school courses, the student would be awarded his/her high school diploma. The student would then continue in college until the degree objective was reached. This type of arrangement would also require approval of high school officials and involves a considerably smaller number of students. With the evolving interest in the state on Advanced Placement courses, this option is being discouraged.

- College courses offered at off-campus locations. While such activities are not typically restricted to the gifted high school students, they do give the highly qualified and motivated student who wants to get a head start on his/her college program that opportunity.

- Special instructional and enrichment programs for youth in a institution's service area. To illustrate, West Virginia State College has a special program entitled "Admissions for Gifted Children" that provides learning opportunities for students who are in a county school system's gifted program, and have permission from both school officials and parents.

- Special events such as the Technical Career Day and Engineering Awareness Day held by West Virginia Institute of Technology.

- Special programs such as the Summer Academic Residential Program offered at West Virginia Institute of Technology, which focused on mathematics and the sciences for academically talented students in their region.

- The Governor's Honor Academy brings together academically talented youth for a month during the summer in a residential setting at one of the public or private higher education institutions.

This is clearly not a complete list of opportunities that are available, but is intended to give examples of the kinds of activities that are occurring throughout the state.

TRENDS IN PUBLIC ELEMENTARY/SECONDARY EDUCATION

The actual and projected number of teacher education graduates from public and private institutions within West Virginia for the five-year period from 1984 to 1988 have been as high as 3,017 in 1984-85 to a low of 2,792 in 1987-88 (see Table 20). Over the five-year period, the number of content specializations completed by graduates and the number of projected graduates for the next two years do not vary significantly. This supports the assumption that Policy 5100 has not had a significant impact on the state's supply of educational personnel. Foreign language teachers are not being prepared in adequate numbers to meet the demand and, even though an adequate number of special education teachers are receiving licensure, the supply fails to meet the demand.

In 1988-89 teacher surplus were reported by 37 counties in elementary education, 31 counties in social studies and physical education, 24 counties in early childhood education, 22 counties in English, 21 counties in music, 17 counties in art and safety, 16 counties in health, 15 counties in home economics, 14 counties in principal, 13 counties in business principles, and 12 counties in general science or language arts. Ten or less counties reported a surplus in agriculture, athletic trainer, behavioral disorders, biology, business education, chemistry, counselor, distributive education, educational audiology, foreign language, French, German, gifted, hearing impaired, industrial arts, journalism, library media, mathematics, mentally impaired, middle childhood education, nurse, oral communications, physically handicapped, physics, preschool handicapped, prevocational exploration, reading, school business official, school psychologist, secretarial studies, speech language pathology, social services and attendance, Spanish, specific learning disabilities, supervisor of instruction, superintendent, vocational administrator, and vocational technical.

Meanwhile, teacher education institutions are expected to graduate 171 social studies teachers, 180 physical education teachers, 77 music teachers, 19 English teachers, and 632 elementary education teachers (WVDE, 1989). Given the number of teachers leaving the state and taking the early retirement incentives, this may not be an adequate supply over the next several years.

Demand for Additional Teachers (WVDE, 1989)

The total annual demand for additional teachers includes those needed to respond to changes in enrollment and teacher-student ratios and to replace teachers leaving the profession (teacher turnover). Assuming that enrollments will rise, teacher-student ratios will improve only slightly, and the teacher turnover rate will remain constant, the demand for additional teachers nationally is projected to increase from 134,000 additional teachers hired each year from 1981 to 1985 to 197,000 additional teachers each year from 1986 to 1990 (Young, 1985).

There were 1,274 new county professional staff employed in West Virginia in 1987-88 and 1,400 new county professional staff employed in West Virginia in 1988-89. Of these figures, 135.5 in 1987-88 and 146.5 in 1988-89 were early childhood; 534.5 in 1987-88 and 433.9 in 1988-89 were early-middle childhood; 116 in 1987-88 and 160.5 in 1988-89 were middle childhood; 252 in 1987-88 and 247 in 1988-89 were middle childhood adolescent; 223 in 1987-88 and 258.5 in 1988-89 were adolescent; and 8 in 1987-88 and 154 in 1988-89 were K-12 education staff. Sixty percent of the new teachers employed in 1987-88 were first-year teachers, as were 57% in 1988-89. This represented 3.32% of the total teachers in 1987-88 and 3.51% in 1988-89 (see Table 21).

In 1988-89, teacher shortages were reported by 10 or more West Virginia counties in agriculture (10 counties), athletic trainer (22 counties), behavioral disorders (36 counties), biology (13 counties), chemistry (19 counties), counselor (16 counties), distributive education (10 counties), educational audiologist (15 counties), French (17 counties), general science (13 counties), German (11 counties), gifted (34 counties), hearing impaired (24 counties), industrial arts (14 counties), Latin (12 counties), mathematics (23 counties), mentally impaired (26 counties), multicategorical special education (18 counties), music (14 counties), physically handicapped (21 counties), physics (19 counties), preschool handicapped (26 counties), reading (19 counties), Russian (10 counties), school library/media (14 counties), school psychologist (16 counties), severely and profoundly handicapped (19 counties), social service and attendance (10 counties), Spanish (18 counties), specific learning disabilities (31 counties), speech language pathologist (39 counties), and visually impaired (20 counties).

The number (1,400) of new teachers employed in West Virginia in 1988-89 represented 6.16% of the total number of teachers. The number (797) of first-year teachers represented 57% of the new teachers and 3.51% of total teachers. Slightly more than 9.0% of county professional educators did not return in 1988-89 compared to 6.26% in 1986-87 and 5.60% in 1987-88.

Changes in Education Degrees Awarded (WVBOR, 1989)

Of the 10,149 degrees awarded by West Virginia public colleges and universities in 1988, 20.3% were in education. This compared with 19.2% in 1986 and 19.2% in 1987. The total number of individuals completing one or more approved educational personnel preparation programs from 1984 through 1988 has remained relatively constant with actual graduates ranging from 1,933 to 2,199. There are three institutions that have shown a decline in numbers of students in teacher education. Fairmont State College has gone from a high of 255 to a low of 154. Marshall University showed a decline of over 100 graduates between 1987 and 1988, but is projecting an increase of graduates of over 200 for the 1988-89 year. West Liberty State College has also shown a trend toward declining enrollments going from 185 in 1986 to 93 in 1988. The West Virginia College of Graduate Studies (as it was known prior to July 1, 1989) appears to be the only institution that has significantly increased its numbers of graduates. Other state institutions have remained relatively constant over the period.

Academic Caliber of Education Majors

Data from the 1988 RATE project of the American Association of Colleges for Teacher Education found that, contrary to popular opinion, students enrolled in teacher education programs are of average ability compared with undergraduate students in general. Their survey showed that, upon graduation, education students have a cumulative grade point average in the 3.0 range, and similar averages in their academic major. They also found that education students have nearly a 3.0 in their general studies courses, which are often prerequisite to entry into teacher preparation programs. The typical teacher education student is in the top third of his or her high school graduating class. With most institutions in West Virginia now requiring a 2.5 overall grade point average to be admitted to teacher education, in addition to the external testing on preprofessional skills and content knowledge, it is safe to assume that the quality of students who are actually admitted to and complete a teacher preparation program in the state of West Virginia is improving.

Program Scope (in West Virginia)

There are 51 content specializations offered within teacher education programs at the 10 public institutions. These programs represent approximately 11% of the total number of bachelor's degree programs available.

Issues and Trends Confronting Education

Education has become the focus of national and state attention as calls for educational reform are being heard from many directions. The challenge to educators is to use the impetus provided by the reform movements to make significant changes in the schools. This will not be an easy task. The direction of change is viewed differently by the different proponents and the teachers who should be having significant input are in the classrooms without adequate time to become deeply involved. These reform issues are of particular concern in West Virginia.

High school completion rate. West Virginia is next to the bottom for the lowest median number of school years completed by persons age 18 and above (12.1 years). Only 56% of West Virginians age 25 and above have a high school diploma, compared with 60% in the region and 66% nationally.

College-going rate. Of the adults in West Virginia who had completed high school by 1986-87, approximately 33.4% went on to college, and 18.5% completed four or more years of college.

College graduates among adults. Approximately 10.5% of West Virginia's adult population have a college education, while the national average is 16.3 percent.

Adult students. Approximately 23.7% of students enrolled at West Virginia's public institutions are age 30 and above. Those age 23-29 represent another 18.6%.

Tuition and required fees. West Virginia has tuition and fee charges that are at the average of the 15 SREB states. Fees for West Virginia undergraduates have increased on average 160% over the past seven years, primarily to offset lagging state appropriations. The state's Higher Education Grant program is underfunded, causing qualified applicants to be denied any grant support.

Salaries. West Virginia's public institutions rank 14th among the 15 SREB states in the average salaries paid to fulltime faculty in the four academic ranks. Marshall University, West Virginia University, and the state's community colleges are in the lowest fifth ranks of the national rankings of faculty salaries compiled by the American Association of University Professors. In addition, classified employees' salaries range from 14% to 24% behind school service personnel who perform comparable tasks.

Access to higher education. West Virginia's 16 public colleges and universities are geographically accessible to a widely dispersed population. With one public institution for each 121,853 persons in the state, West Virginia ranks 21st among the 50 states (30th when private colleges are included) and sixth among the 15 SREB states in the number of public institutions per capita. Thus, the state does not have too many colleges and universities. Through a variety of off-campus centers and courses, the state's public institutions attempt to make higher education accessible to most of its citizens. The Carnegie Report (1989) recommended providing a coordinated system of community colleges that are coordinated with the state's vocational-technical centers to improve access for all citizens.

Higher education as an investment for West Virginia. West Virginia needs to invest even more in its people and assist more of them to develop the skills needed in the future. Through such an investment in its people, West Virginia can quicken the pace of economic development, raise average per capita income, and increase the general prosperity, health, and satisfaction of its citizens. College graduates earn on an average approximately $1,229 per month more than noncollege graduates. College graduates return eight times more in taxes and contributions to the state's economy than nongraduates.

Recent Trends (see Table 19)

The graduation rate in West Virginia high schools rose to 76.2% in 1987, which was 21st in the nation. American College Test scores have not shown similar improvement. West Virginia was 26th of 28 states reporting results on this test.

The expenditures per pupil in West Virginia's schools increased slightly in 1987, and class sizes got marginally smaller.

The pupil/classroom teacher ratio for 1977 in West Virginia was 20.6 compared to 20.4 nationally, in 1987 it was 15.34 in West Virginia and 17.77 nationally, and in 1988 it was 15.18 in West Virginia compared to 17.61 nationally.

The average teacher salary for West Virginia in 1987 was $21,446 compared to $26,556 nationally, which placed West Virginia 45th among all states.

In 1988-89, county boards of education received 8% of their funds from federal sources, 65% from the state, and 27% from local sources.

Rural and small schools have characteristics and needs that are unique.

Continuing reform efforts in West Virginia include:

Curriculum reform. The Honor's program is an example of the continued effort to get higher level courses included in secondary curricula. Elementary teachers are being given more flexibility to deliver their content, recognizing that the integration is important at that level.

Graduation requirements. State Board Policy requires that graduation requirements be reviewed at least once every five years. In the review that occurred in 1984, an additional unit of science was added to the requirements and, after much debate, one unit each of health and physical education continue to be required.

Academic enrichment. The Governor's Honor Academy, a four-week summer camp for students gifted in the humanities, fine arts, mathematics, and science, has occurred each summer since 1984. It involves high school students who have just completed their junior year. Funding for the program is provided to the Department of Education from the legislature and through a grant from private industry.

College admissions. The State Board of Regents has revised its policy on admissions to increase course requirements in specific academic areas.

Student testing. Student outcome-referenced testing is underway to measure student attainment of state-adopted learning outcomes. A norm-referenced testing program has been updated.

School accreditation. All county school systems have now received at least one on-site accreditation visit to determine if the district is in compliance with Policy 2510.

Extracurricular activities policies. In January 1984, West Virginia became the first state in the country to require students to maintain a C average to participate in athletics and other extracurricular activities. Even though the policy was challenged, it remains in effect.

Teacher preparation. Policy 5100 continues to provide the structure for the preparation of educational personnel for West Virginia schools. All students in preparation programs will be under the new policy by June 30, 1990. Most institutions have seen no negative impact on the number of graduates as a result of the competency testing associated with Policy 5100.

Teacher salary increases. The legislature provides raises on a year-to-year basis with the exception of raises for service and for additional educational steps on the salary schedule. An issue that has surfaced during the past two legislative sessions is the idea of pay raises being tied to in-field masters. The issue has yet to be resolved even though there is strong support for providing an additional $1,000 for training in the field to which a teacher is assigned.

Professional development of administrators. The Principal's Academy has been considered very effective and has continued to receive financial support. The academy is a 17-day residential program that provides in-depth professional development on the effective schools and school improvement literature. The principal must make a three-year commitment to develop and implement a three-year plan designed to improve quality and equity of student achievement. Four hundred principals will have an effective schools program for local districts. This involves a year-long commitment to all principals and key teachers from each school in a district and a school-level program for school improvement based on effective schools research.

The AEL Board of Directors from West Virginia (Appendix A) met on July 22, 1989, in Virginia Beach, Virginia, as part of their regularly scheduled Board meeting as a state caucus group. Their task was to prioritize a list of needs (Appendix B) that had been generated by AEL from state data. The Board was then to take the needs they identified as high priority and give their collective opinion on how aware the state was of this need, and the state's capability and readiness to address the need. The next step was to identify opportunities and/or resources that could help the state address the need (Appendix C). A review of these high priority needs became a good summary for the trends and issues in education in West Virginia because they match components of the Recht Decision (1982) and/or the Carnegie Report (1989). The highest priority was the need for improved financial support for the local schools. This was a priority of the Recht Decision but, as discussed earlier, neither the property reappraisal nor the Uniform School Funding Act have been implemented. The need that received the second highest priority was the need to improve students' mastery of basic skills. This need has had more success than the first; there have been improvements in students' basic skills and the 1988-89 legislature provided funding for computers to help facilitate acquisition of basic skills. Two needs received equal rankings for the third position: (1) the need to improve school facilities to ensure the delivery of quality education to all children, and (2) the need to study the use of technology as a means for improving the delivery of instruction to all children. These two needs relate closely to the first and second needs, since facilities is closely related to funding and the use of technology is tied to the basic skills legislation. The fifth-ranked need relates to one of the Carnegie Report's (1989) top priorities, which is the need to improve career education programming/ career guidance services.

R & D RESOURCES AVAILABLE TO SUPPORT ELEMENTARY/SECONDARY EDUCATION

Research and development resources for supporting elementary and secondary education in West Virginia continue to be limited. Faculty members at teacher education institutions in the state are available, on a paid consultant basis, to perform research services for public school districts. While no organized or planned program of research and development for education exists across institutions of higher education in West Virginia, there are some individual efforts occurring. Most notably is West Virginia University and its Professional Development Schools. West Virginia University has received external funding to begin a five-year educational reform effort aimed at improving the quality of education in West Virginia schools. Their three major goals are:

- to reconceptualize those programs that prepare teachers and other educational professionals to make these programs intellectually sound and congruent with one another;
- to establish professional development schools that will bridge the gap between research and practice in the profession; and
- to establish collaborative processes, strategies, and structures that will make these changes last. (WVU, 1988)

Young (1985) reported that the following professional associations provide limited R & D services to public school districts, primarily by sharing recent research findings through publications and state meetings.

- West Virginia State Reading Council
- West Virginia Association of Social Services and Attendance
- West Virginia Library Association
- West Virginia School Boards Association
- West Virginia Association of School Administrators

- West Virginia Congress of Parents and Teachers
- West Virginia Education Association
- West Virginia Association of School Business Officials
- West Virginia Personnel and Guidance Association
- West Virginia Gifted Education Association
- West Virginia Association of Elementary School Principals
- West Virginia Secondary School Principal's Commission
- West Virginia School Service Personnel Association
- West Virginia Professional Educators Association
- West Virginia School Psychologists Association
- West Virginia School Food Service Association
- West Virginia School Health Association
- West Virginia Association for Young Children
- West Virginia Middle School Association
- West Virginia Secondary School Activities Commission
- West Virginia Association for Supervision and Curriculum Development
- West Virginia School Public Relations Association

The most comprehensive R & D resource in West Virginia is the Appalachia Educational Laboratory in Charleston, West Virginia.

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Table B. Counties — **Area and Population**

MSA/ CMSA/ NECMA code[1]	State and county code	County	Land area,[2] 1980 (Sq. mi.)	Population: 1986: Total persons	Population: 1986: Rank[3]	Population: 1986: Per square mile	Population: 1980	Components of change, 1980-1986: Net change: Number	Net change: Percent	Natural increase: Births	Natural increase: Deaths	Net migration[4]	Population characteristics: 1984: Percent—White	Percent—Black and other	Males per 100 females
			1	2	3	4	5	6	7	8	9	10	11	12	13
		VIRGINIA—Con.													
6800	51 770	Roanoke	43	101 800	433	2 369.8	100 220	1 700	1.7	8 900	7 800	500	76.00	24.00	84.3
6800	51 775	Salem	14	23 700	1 512	1 692.9	23 958	-200	-.9	1 600	1 500	-300	95.22	4.78	94.3
...	51 780	South Boston	6	7 000	2 678	1 166.7	7 093	-100	-.8	500	500	-100	S	S	S
...	51 790	Staunton	9	21 500	1 611	2 388.9	21 857	-300	-1.5	1 700	1 600	-300	89.24	10.76	85.8
5720	51 800	Suffolk	409	51 300	807	125.4	47 621	3 700	7.8	4 600	3 200	2 300	54.28	45.72	89.2
5720	51 810	Virginia Beach	256	333 400	143	1 302.3	262 199	71 200	27.2	32 900	8 400	46 700	84.93	15.07	101.3
...	51 820	Waynesboro	8	18 100	1 803	2 262.5	18 563	-600	-2.7	1 400	1 000	-900	S	S	S
5720	51 830	Williamsburg	5	11 400	2 284	2 280.0	10 294	1 100	10.3	1 100	600	600	S	S	S
—	51 840	Winchester	9	21 200	1 626	2 355.6	20 217	1 000	4.7	1 700	1 600	800	88.56	11.44	86.8
—	53 000	WASHINGTON	66 511	4 462 000	X	67.1	4 132 000	330 000	8.0	433 000	207 000	105 000	92.09	7.91	99.5
—	53 001	Adams	1 921	13 800	2 099	7.2	13 267	500	3.9	1 900	600	-800	S	S	S
...	53 003	Asotin	635	17 100	1 863	26.9	16 823	300	1.8	1 600	1 000	-300	S	S	S
6740	53 005	Benton	1 715	112 700	397	65.7	109 444	3 300	3.0	13 000	3 700	-6 100	95.40	4.60	106.4
...	53 007	Chelan	2 916	49 900	832	17.1	45 061	4 900	10.8	5 100	3 200	3 000	98.54	1.46	97.2
...	53 009	Clallam	1 753	53 700	779	30.6	51 648	2 100	4.0	5 100	3 200	200	94.14	5.86	99.0
6440	53 011	Clark	627	211 300	230	337.0	192 227	19 100	9.9	20 100	8 600	7 600	95.85	4.15	99.8
...	53 013	Columbia	865	4 200	2 917	4.9	4 057	100	2.7	400	300	100	S	S	S
—	53 015	Cowlitz	1 140	78 700	561	69.0	79 548	-900	-1.1	7 600	4 000	-4 400	97.24	2.76	99.5
—	53 017	Douglas	1 817	24 200	1 489	13.3	22 144	2 100	9.4	2 300	1 000	800	98.91	1.09	99.9
...	53 019	Ferry	2 200	5 900	2 782	2.7	5 811	-	.8	800	300	-300	S	S	S
6740	53 021	Franklin	1 243	36 800	1 082	29.6	35 025	1 800	5.1	5 400	1 400	-2 200	92.75	7.25	107.0
...	53 023	Garfield	706	2 500	3 034	3.5	2 468	-	-.4	200	200	-100	S	S	S
—	53 025	Grant	2 660	53 100	786	20.0	48 522	4 500	9.4	5 900	2 200	900	96.35	3.65	103.7
—	53 027	Grays Harbor	1 918	62 700	688	32.7	66 314	-3 600	-5.5	6 700	4 000	-6 300	95.73	4.27	100.8
—	53 029	Island	212	49 600	634	234.0	44 048	5 500	12.6	5 300	2 100	2 300	93.64	6.36	108.1
...	53 031	Jefferson	1 805	18 500	1 784	10.2	15 965	2 500	15.8	1 400	1 000	2 100	S	S	S
7602	53 033	King	2 128	1 362 300	18	640.2	1 269 898	92 400	7.3	117 300	61 800	36 900	87.79	12.21	98.4
1150	53 035	Kitsap	393	169 200	275	430.5	147 152	22 100	15.0	17 100	6 800	11 900	92.97	7.03	107.8
...	53 037	Kittitas	2 306	24 700	1 471	10.7	24 877	-200	-.8	2 100	1 300	-1 000	97.75	2.25	97.7
...	53 039	Klickitat	1 880	16 200	1 924	8.6	15 822	400	2.4	1 700	800	-500	S	S	S
...	53 041	Lewis	2 409	58 200	731	24.2	56 025	2 200	3.8	5 800	3 400	-300	98.18	1.82	101.1
...	53 043	Lincoln	2 310	9 400	2 454	4.1	9 604	-200	-1.8	800	700	-300	S	S	S
...	53 045	Mason	961	36 000	1 105	37.5	31 184	4 800	15.3	3 200	1 800	3 400	94.69	5.31	109.4
...	53 047	Okanogan	5 281	32 500	1 204	6.2	30 663	1 800	5.9	3 800	1 900	-	87.80	12.20	98.3
...	53 049	Pacific	908	17 400	1 646	19.2	17 237	200	1.1	1 600	1 400	-	S	S	S
...	53 051	Pend Oreille	1 400	9 000	2 482	6.4	8 580	500	5.4	800	500	200	S	S	S
7602	53 053	Pierce	1 675	533 300	87	318.4	485 667	47 700	9.8	58 400	23 500	12 800	87.49	12.51	102.7
...	53 055	San Juan	179	9 200	2 470	51.4	7 838	1 400	17.3	600	400	1 200	S	S	S
...	53 057	Skagit	1 735	69 600	619	40.1	64 138	5 500	8.6	6 800	4 000	2 700	97.26	2.74	94.4
...	53 059	Skamania	1 672	7 700	2 616	4.6	7 919	-200	-2.4	800	300	-700	S	S	S
7602	53 061	Snohomish	2 098	388 800	123	185.3	337 720	51 100	15.1	38 400	14 800	27 600	95.33	4.67	98.1
7840	53 063	Spokane	1 762	356 900	135	202.6	341 835	15 100	4.4	35 200	18 700	-1 500	95.63	4.37	93.0
...	53 065	Stevens	2 470	31 600	1 231	12.8	28 979	2 600	9.1	3 300	1 500	900	93.71	6.29	105.8
5910	53 067	Thurston	727	146 600	309	201.7	124 264	22 400	18.0	13 400	6 100	15 100	94.04	5.96	96.0
...	53 069	Wahkiakum	261	3 600	2 961	13.8	3 832	-300	-6.9	300	200	-300	S	S	S
...	53 071	Walla Walla	1 261	48 000	853	38.1	47 435	800	1.2	4 300	2 900	-800	97.14	2.86	97.2
0860	53 073	Whatcom	2 125	113 700	395	53.5	106 701	7 000	6.6	10 400	5 200	1 900	95.38	4.62	95.8
...	53 075	Whitman	2 151	40 700	980	18.9	40 103	600	1.4	3 100	1 300	-1 200	94.16	5.84	109.2
9260	53 077	Yakima	4 287	183 200	249	42.7	172 508	10 700	6.2	21 000	9 700	-600	94.02	5.98	99.6
...	54 000	WEST VIRGINIA	24 119	1 918 000	X	79.5	1 950 000	-31 000	-1.6	184 000	120 000	-74 000	96.26	3.74	94.6
—	54 001	Barbour	343	16 500	1 901	48.1	16 639	-100	-.7	1 400	1 100	-500	S	S	S
—	54 003	Berkeley	321	51 500	805	160.4	46 775	4 700	10.0	4 500	3 000	3 200	95.27	4.73	96.3
...	54 005	Boone	503	29 900	1 285	59.4	30 447	-600	-1.8	2 600	1 700	-1 400	98.85	1.15	103.9
...	54 007	Braxton	513	14 600	2 035	28.5	13 894	700	5.3	1 100	1 000	600	S	S	S
8080	54 009	Brooke	90	29 500	1 303	327.8	31 117	-1 600	-5.2	2 100	1 700	-2 000	99.04	.96	96.8
3400	54 011	Cabell	282	104 700	423	371.3	106 835	-2 100	-2.0	8 600	7 300	-3 400	95.61	4.39	90.5
...	54 013	Calhoun	280	8 200	2 582	29.3	8 250	-	-.3	900	600	-300	S	S	S
—	54 015	Clay	346	11 400	2 284	32.9	11 265	100	1.2	1 100	700	-300	S	S	S
—	54 017	Doddridge	321	7 700	2 616	24.0	7 433	300	3.7	700	500	100	S	S	S
—	54 019	Fayette	667	56 500	757	83.2	57 863	-2 400	-4.1	4 900	4 100	-3 200	92.01	7.99	94.6
—	54 021	Gilmer	340	8 500	2 541	25.0	8 334	200	1.9	800	500	-100	S	S	S
...	54 023	Grant	480	9 700	2 430	20.2	10 210	-500	-5.1	800	600	-700	S	S	S
...	54 025	Greenbrier	1 025	38 400	1 036	37.5	37 665	700	2.0	3 000	2 600	400	95.76	4.24	96.3
...	54 027	Hampshire	644	16 200	1 924	25.2	14 867	1 300	8.7	1 300	900	900	S	S	S
8080	54 029	Hancock	84	39 600	1 006	471.4	41 053	-1 400	-3.5	2 900	2 300	-2 000	96.53	3.47	95.5
...	54 031	Hardy	585	10 000	2 410	17.1	10 030	-	-.2	700	700	-100	S	S	S
...	54 033	Harrison	417	75 200	586	180.3	77 710	-2 500	-3.2	6 700	5 500	-3 700	98.27	1.73	89.4
...	54 035	Jackson	464	26 300	1 405	56.7	25 794	500	1.9	2 300	1 300	-500	99.72	.28	93.9
...	54 037	Jefferson	209	33 800	1 169	161.7	30 302	3 500	11.4	2 900	1 700	2 200	90.35	9.65	96.4

[1]MSA = Metropolitan statistical area. CMSA = Consolidated MSA. NECMA = New England county metropolitan area. All areas defined as of October 18, 1986. [2]Dry land and land mporarily or partially covered by water. [3]When counties share the same rank, the next lower rank is omitted. [4]Comprises net immigration from abroad, net interstate migration, and movement of persons in the Armed Forces.

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Table B. Counties — **Area and Population**

MSA/ CMSA/ NECMA code[1]	State and county code	County	Land area[2] 1980 (Sq. mi.)	Population									Population characteristics		
				1986			1980	Components of change, 1980-1986					1984		
								Net change		Natural increase		Net migration[4]	Percent—		Males per 100 females
				Total persons	Rank[3]	Per square mile		Number	Percent	Births	Deaths		White	Black and other	
			1	2	3	4	5	6	7	8	9	10	11	12	13
		WEST VIRGINIA—Con.													
1480	54 039	Kanawha	901	224 100	210	248.7	231 414	-7 300	-3.1	19 000	14 200	-12 000	93.46	6.54	90.6
...	54 041	Lewis	389	18 700	1 788	48.1	18 813	-100	-.4	1 600	1 400	-200	S	S	S
...	54 043	Lincoln	439	21 100	1 633	48.1	23 675	-2 600	-10.9	2 200	1 300	-3 500	99.84	.16	97.4
...	54 045	Logan	456	49 500	836	108.6	50 679	-1 100	-2.3	4 500	3 000	-2 700	95.78	4.22	95.5
...	54 047	McDowell	535	45 300	900	84.7	49 899	-4 600	-9.2	4 700	3 000	-6 300	85.19	14.81	93.3
...	54 049	Marion	312	64 100	676	205.4	65 789	-1 700	-2.6	5 100	4 400	-2 500	95.56	4.44	88.5
9000	54 051	Marshall	305	39 200	1 017	128.5	41 608	-2 400	-5.7	3 300	2 300	-3 300	99.03	.97	95.1
...	54 053	Mason	433	25 900	1 424	59.8	27 045	-1 100	-4.1	2 400	1 600	-1 800	99.16	.84	101.6
...	54 055	Mercer	420	70 900	612	168.8	73 942	-3 000	-4.1	6 100	4 800	-4 300	92.79	7.21	91.0
1900	54 057	Mineral	329	27 700	1 365	84.2	27 234	500	1.7	2 300	1 600	-300	97.55	2.45	99.8
...	54 059	Mingo	424	36 800	1 082	86.8	37 336	-500	-1.4	4 200	2 200	-2 500	97.21	2.79	101.2
...	54 061	Monongalia	363	77 700	570	214.0	75 024	2 700	3.6	5 800	3 400	200	96.61	3.39	100.3
...	54 063	Monroe	473	12 200	2 222	25.8	12 873	-700	-5.1	1 100	900	-800	S	S	S
...	54 065	Morgan	230	10 100	2 386	43.9	10 711	-600	-5.3	800	700	-800	S	S	S
...	54 067	Nicholas	650	28 400	1 333	43.7	28 126	300	1.0	2 500	1 500	-800	99.87	.13	96.6
9000	54 069	Ohio	106	58 000	732	547.2	61 389	-3 400	-5.5	4 500	4 600	-3 300	95.96	4.04	86.3
...	54 071	Pendleton	698	7 900	2 592	11.3	7 910	-	-.1	700	500	-200	S	S	S
...	54 073	Pleasants	131	8 100	2 576	61.8	8 236	-200	-2.3	700	500	-400	S	S	S
...	54 075	Pocahontas	942	9 500	2 445	10.1	9 919	-500	-4.8	800	700	-500	S	S	S
...	54 077	Preston	651	30 400	1 264	46.7	30 460	-100	-.2	3 000	1 800	-1 200	99.41	.59	97.2
1480	54 079	Putnam	346	42 300	950	122.3	38 181	4 100	10.7	3 300	1 700	2 500	99.72	.28	97.1
...	54 081	Raleigh	608	84 200	529	138.5	86 821	-2 600	-3.0	7 000	5 400	-4 200	91.51	8.49	94.2
...	54 083	Randolph	1 040	28 300	1 335	27.2	28 734	-400	-1.3	2 600	1 800	-1 200	98.80	1.20	97.5
...	54 085	Ritchie	454	11 200	2 290	24.7	11 442	-300	-2.5	800	800	-400	S	S	S
...	54 087	Roane	484	15 500	1 874	32.0	15 952	-400	-2.8	1 500	1 100	-800	S	S	S
...	54 089	Summers	353	14 400	2 049	40.8	15 875	-1 500	-9.2	1 200	1 100	-1 600	S	S	S
...	54 091	Taylor	174	16 300	1 820	93.7	16 584	-300	-1.5	1 400	1 100	-600	S	S	S
...	54 093	Tucker	421	8 600	2 527	20.4	8 675	-100	-1.3	700	700	-100	S	S	S
...	54 095	Tyler	258	11 000	2 314	42.6	11 320	-300	-2.6	800	700	-500	S	S	S
...	54 097	Upshur	355	24 700	1 471	69.6	23 427	1 300	5.5	2 200	1 400	500	99.47	.53	99.4
3400	54 099	Wayne	508	44 600	911	87.8	46 021	-1 400	-3.1	3 700	2 400	-2 800	99.84	.16	96.5
...	54 101	Webster	556	11 900	2 246	21.4	12 245	-400	-3.2	1 100	800	-700	S	S	S
...	54 103	Wetzel	359	21 700	1 604	60.4	21 874	-100	-.6	2 000	1 400	-700	99.68	.32	95.0
...	54 105	Wirt	235	4 600	2 890	19.6	4 922	-300	-6.5	500	300	-500	S	S	S
6020	54 107	Wood	367	92 000	473	250.7	93 623	-1 600	-1.7	7 800	5 400	-4 000	99.13	.87	91.0
...	54 109	Wyoming	502	34 700	1 144	69.1	35 993	-1 300	-3.5	3 100	1 700	-2 700	98.77	1.23	97.6
...	55 000	WISCONSIN	54 426	4 785 000	X	87.9	4 706 000	79 000	1.7	460 000	256 000	-125 000	94.52	5.48	96.4
...	55 001	Adams	648	14 200	2 085	21.9	13 457	700	5.5	1 100	1 000	600	S	S	S
...	55 003	Ashland	1 048	16 700	1 886	15.9	16 783	-	-.5	1 700	1 300	-400	S	S	S
...	55 005	Barron	865	40 500	982	46.8	38 730	1 800	4.7	4 200	2 700	300	99.36	.64	97.9
...	55 007	Bayfield	1 462	14 200	2 085	9.7	13 822	400	2.8	1 300	900	-	S	S	S
3080	55 009	Brown	524	187 200	247	357.3	175 280	11 900	6.8	17 800	7 800	1 800	96.81	3.19	95.7
...	55 011	Buffalo	699	14 500	2 042	20.7	14 309	200	1.4	1 400	800	-300	S	S	S
...	55 013	Burnett	818	13 500	2 118	16.5	12 340	1 200	9.5	1 100	900	900	S	S	S
0460	55 015	Calumet	326	35 400	1 123	108.6	30 867	4 500	14.5	3 300	1 300	2 500	98.98	1.02	99.9
2290	55 017	Chippewa	1 017	53 600	782	52.7	52 127	1 500	2.8	5 500	2 900	-1 100	99.32	.68	96.9
...	55 019	Clark	1 218	33 000	1 180	27.1	32 910	-	.3	3 400	2 200	-1 200	99.52	.48	102.1
...	55 021	Columbia	771	45 400	888	58.9	43 222	2 100	5.0	4 100	2 700	800	99.49	.51	96.6
...	55 023	Crawford	566	16 700	1 886	29.5	16 556	200	1.0	1 700	1 100	-500	S	S	S
4720	55 025	Dane	1 205	344 800	137	286.2	323 545	21 300	6.6	29 700	12 600	4 200	96.10	3.90	96.0
...	55 027	Dodge	887	75 300	584	84.9	75 064	200	.3	7 100	4 400	-2 500	98.49	1.51	100.2
...	55 029	Door	492	26 500	1 400	53.9	25 029	1 500	5.9	2 500	1 800	800	99.05	.95	106.0
2240	55 031	Douglas	1 305	41 600	861	31.9	44 421	-2 800	-6.3	4 000	2 800	-4 000	98.28	1.72	95.5
...	55 033	Dunn	853	35 000	1 130	41.0	34 314	700	2.1	3 200	1 700	-800	98.29	1.71	99.1
2290	55 035	Eau Claire	638	83 100	536	130.3	78 805	4 300	5.5	7 500	3 800	600	98.04	1.96	91.8
...	55 037	Florence	486	4 100	2 923	8.4	4 172	-	-1.7	400	300	-100	S	S	S
...	55 039	Fond du Lac	725	90 400	484	124.7	88 964	1 400	1.6	8 700	4 900	-2 400	99.45	.55	94.2
...	55 041	Forest	1 011	9 200	2 470	9.1	9 044	100	1.6	1 000	700	-100	S	S	S
...	55 043	Grant	1 144	51 300	807	44.8	51 736	-400	-.8	5 000	2 900	-2 500	99.52	.48	104.5
...	55 045	Green	583	30 500	1 259	52.3	30 012	500	1.6	3 000	1 900	-600	99.63	.37	96.1
...	55 047	Green Lake	357	18 900	1 752	52.9	18 370	600	3.0	1 900	1 300	-	S	S	S
...	55 049	Iowa	760	20 600	1 657	27.1	19 802	800	4.0	2 100	1 200	-100	99.51	.49	108.8
...	55 051	Iron	751	6 200	2 756	8.3	6 730	-500	-8.0	400	500	-500	S	S	S
...	55 053	Jackson	996	16 400	1 909	16.4	16 831	-500	-2.8	1 600	1 100	-1 000	S	S	S
...	55 055	Jefferson	562	68 000	636	121.0	66 152	1 800	2.8	6 200	3 500	-800	99.32	.68	100.7
...	55 057	Juneau	774	21 400	1 615	27.6	21 037	400	1.9	2 200	1 400	-300	98.94	1.06	99.8
1602	55 059	Kenosha	273	120 000	379	439.6	123 137	-3 100	-2.5	11 500	6 400	-8 200	96.36	3.64	97.5
...	55 061	Kewaunee	343	20 000	1 888	58.3	19 539	400	2.2	2 000	1 100	-400	99.73	.27	101.2
3870	55 063	La Crosse	457	94 100	462	205.9	91 056	3 100	3.4	8 700	4 800	-800	99.13	.87	90.0

[1]MSA = Metropolitan statistical area. CMSA = Consolidated MSA. NECMA = New England county metropolitan area. All areas defined as of October 18, 1986. [2]Dry land and land temporarily or partially covered by water. [3]When counties share the same rank, the next lower rank is omitted. [4]Comprises net immigration from abroad, net interstate migration, and movement of persons in the Armed Forces.

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TABLE 2

Table B. Counties — Population Characteristics and Households

County	Population characteristics—Con												Households					
	1984—Con									1980			1985			1980		
	Percent—									Percent—							Percent—	
	Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	American Indian, Eskimo, and Aleut	Asian and Pacific Islander	Hispanic[1]	Number	Percent change 1980–1985	Persons per household	Number	Female family householder[2]	One-person[3]
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
VIRGINIA—Con																		
Roanoke	6.5	11.8	16.0	17.8	10.6	8.7	11.6	9.6	7.5	.07	.31	.68	41 400	3.4	2.40	40 023	14.4	27.9
Salem	5.1	10.7	17.0	16.0	12.2	11.2	11.1	8.5	7.3	.10	.31	.41	9 300	7.3	2.41	8 646	11.1	22.4
South Boston	S	S	S	S	S	S	S	S	S	.07	.55	.75	2 800	7.0	2.53	2 616	15.0	24.7
Staunton	6.8	10.7	15.7	14.5	12.8	10.9	12.0	9.5	7.0	.12	.22	.53	8 300	2.3	2.43	8 097	10.7	24.2
Suffolk	7.1	14.6	15.9	15.0	14.0	10.1	11.0	7.8	4.5	.12	.23	.73	17 700	12.1	2.82	15 742	15.4	17.5
Virginia Beach	8.3	15.9	18.6	21.4	15.1	8.9	6.7	3.3	1.8	.24	2.51	1.87	109 600	28.8	2.83	85 155	10.3	15.3
Waynesboro	S	S	S	S	S	S	S	S	S	.08	.24	.59	7 500	27.0	2.47	5 870	11.1	22.3
Williamsburg	S	S	S	S	S	S	S	S	S	.12	1.37	1.07	3 800	26.9	2.06	2 820	7.6	35.5
Winchester	7.1	10.1	17.0	16.4	11.1	10.8	11.4	9.5	8.8	.06	.48	.86	8 500	6.4	2.34	7 971	11.3	29.2
WASHINGTON	7.8	14.0	16.8	19.0	13.9	8.9	8.7	6.3	4.4	1.47	2.48	2.90	1 691 000	9.8	2.54	1 540 510	8.2	24.2
Adams	S	S	S	S	S	S	S	S	S	.46	.53	22.26	5 000	10.7	2.73	4 488	6.6	19.9
Asotin	S	S	S	S	S	S	S	S	S	.90	.32	.93	6 900	5.9	2.50	6 470	9.8	25.0
Benton	9.0	16.0	14.8	21.2	15.3	8.7	7.2	5.2	2.8	.71	1.33	4.20	40 900	4.8	2.72	38 978	6.0	19.6
Chelan	7.5	13.3	13.5	16.8	12.9	9.5	11.1	8.7	6.6	.79	.45	3.04	19 900	11.9	2.43	17 792	6.9	25.6
Clallam	7.5	13.5	12.6	17.3	11.9	9.0	11.3	10.6	6.2	4.09	.79	1.25	21 300	6.5	2.43	19 996	7.0	23.2
Clark	8.6	16.1	15.3	19.0	15.0	8.4	7.6	6.2	3.8	.79	1.19	1.59	76 200	10.9	2.69	68 750	8.6	20.5
Columbia	S	S	S	S	S	S	S	S	S	.71	.47	2.79	1 600	2.2	2.51	1 578	6.4	24.5
Cowlitz	8.3	15.5	14.5	18.0	13.8	9.2	8.7	7.3	4.8	1.21	1.02	1.34	30 400	3.2	2.58	29 516	8.6	22.0
Douglas	7.6	15.3	14.4	19.3	14.0	9.6	9.0	6.8	3.9	.80	.42	2.94	8 900	11.8	2.68	7 994	6.6	18.4
Ferry	S	S	S	S	S	S	S	S	S	16.92	.10	1.05	2 100	5.1	2.77	1 954	8.2	19.1
Franklin	10.7	17.1	16.3	19.4	11.3	8.6	8.1	5.5	3.0	.67	.84	15.45	12 700	5.7	2.82	11 985	7.6	20.4
Garfield	S	S	S	S	S	S	S	S	S	.08	.41	.24	1 000	4.6	2.51	942	3.7	22.9
Grant	8.9	17.1	14.9	15.5	12.6	8.7	10.3	7.2	3.8	.87	1.10	11.27	19 100	11.3	2.71	17 158	6.7	21.1
Grays Harbor	8.1	14.8	14.3	17.4	12.4	9.1	9.6	8.8	5.5	3.46	.70	1.31	24 600	-2.3	2.53	25 181	7.7	24.6
Island	8.0	13.0	16.0	18.0	13.3	7.8	11.4	8.6	3.9	.86	3.12	2.55	18 600	17.0	2.51	15 859	6.3	18.5
Jefferson	S	S	S	S	S	S	S	S	S	2.76	.65	1.28	7 200	13.5	2.42	6 359	6.7	23.1
King	7.0	11.8	17.1	20.7	14.4	9.3	8.7	6.5	4.4	.98	4.62	2.10	544 300	9.5	2.42	497 263	8.5	27.9
Kitsap	8.1	15.2	16.3	19.3	15.5	8.3	7.4	6.1	3.8	1.38	3.10	2.57	61 300	16.1	2.64	52 809	7.5	21.5
Kittitas	6.6	10.5	26.1	15.9	11.7	7.0	9.2	7.9	5.0	.85	.73	1.26	9 900	4.1	2.29	9 496	6.6	28.5
Klickitat	S	S	S	S	S	S	S	S	S	2.95	.62	3.00	6 100	6.5	2.68	5 754	6.0	21.3
Lewis	7.7	16.0	14.3	14.6	13.4	9.6	9.8	8.7	5.9	.88	.53	1.21	21 500	4.1	2.64	20 663	7.0	22.8
Lincoln	S	S	S	S	S	S	S	S	S	1.41	.26	.77	3 700	1.4	2.53	3 687	4.2	23.6
Mason	7.2	14.1	14.7	15.5	13.0	9.5	12.1	9.1	4.8	3.23	.74	1.39	13 400	13.4	2.52	11 771	6.2	23.5
Okanogan	8.6	15.8	13.1	16.9	14.5	8.9	8.9	7.8	5.5	10.55	.23	2.04	12 100	6.4	2.67	11 361	7.5	22.6
Pacific	S	S	S	S	S	S	S	S	S	2.07	.55	1.00	7 200	3.2	2.39	6 940	5.7	25.9
Pend Oreille	S	S	S	S	S	S	S	S	S	2.24	.22	1.19	3 300	10.9	2.88	3 002	5.7	19.7
Pierce	8.1	14.2	18.9	18.2	13.3	8.9	8.5	6.0	3.9	1.22	3.01	2.65	195 700	12.3	2.57	174 232	9.4	23.0
San Juan	S	S	S	S	S	S	S	S	S	.88	.45	.64	4 000	20.8	2.15	3 340	6.0	25.7
Skagit	7.6	14.3	13.7	17.3	13.1	8.7	10.4	9.1	5.8	1.77	.54	3.13	26 700	9.2	2.52	24 472	7.6	23.0
Skamania	S	S	S	S	S	S	S	S	S	1.19	.34	1.02	2 800	.2	2.67	2 819	5.1	20.3
Snohomish	8.3	15.1	15.5	20.5	14.7	8.9	7.7	5.7	3.6	1.23	1.48	1.61	138 700	14.9	2.88	120 699	8.4	19.5
Spokane	7.8	14.7	16.8	17.9	12.9	8.9	8.9	7.1	5.1	1.23	1.14	1.41	137 600	7.1	2.52	128 403	9.2	25.4
Stevens	9.2	19.2	12.3	18.5	15.4	8.2	6.3	6.6	4.2	5.19	.36	1.07	10 700	8.4	2.91	9 846	6.2	18.6
Thurston	8.0	15.2	15.2	18.8	15.1	8.9	8.4	6.3	4.2	1.39	1.96	2.07	54 600	17.8	2.56	46 375	8.5	22.6
Wahkiakum	S	S	S	S	S	S	S	S	S	1.41	.39	2.04	1 300	-3.4	2.74	1 353	4.2	18.6
Walla Walla	7.0	13.8	17.4	16.1	12.8	8.5	10.1	7.8	6.5	.06	.73	5.42	17 400	2.3	2.51	16 975	8.0	25.2
Whatcom	7.7	13.6	19.2	18.1	13.2	8.0	8.2	6.9	5.0	3.05	.85	1.94	43 000	8.6	2.53	39 630	7.2	23.7
Whitman	6.0	8.9	37.4	16.1	9.7	6.7	6.5	5.0	3.6	.63	2.76	1.57	13 800	4.0	2.40	13 279	4.3	24.9
Yakima	8.4	16.8	15.2	16.3	13.3	8.8	8.9	7.4	5.0	3.96	.71	14.76	65 700	7.1	2.74	61 341	8.9	21.6
WEST VIRGINIA	7.0	15.4	16.2	16.3	12.6	9.5	10.0	7.8	5.1	.08	.27	.65	711 000	3.6	2.68	686 311	9.4	20.7
Barbour	S	S	S	S	S	S	S	S	S	.13	.13	.86	5 900	4.0	2.73	5 670	8.7	21.4
Berkeley	7.1	15.5	15.8	16.3	13.6	9.9	10.0	7.3	4.4	.10	.28	.73	18 700	13.8	2.65	16 432	9.1	21.4
Boone	8.3	17.6	15.9	16.8	13.2	8.5	9.6	6.1	3.9	.06	.13	.54	10 300	1.0	2.92	10 185	9.0	16.2
Braxton	S	S	S	S	S	S	S	S	S	.09	.06	.57	5 400	9.2	2.77	4 903	10.1	20.3
Brooke	7.0	14.5	16.2	17.0	12.7	10.1	10.0	7.8	4.7	.06	.09	.36	10 600	-.5	2.74	10 619	8.2	19.1
Cabell	6.0	13.4	18.0	15.1	12.8	10.0	10.6	8.1	6.0	.07	.36	.49	41 800	3.8	2.46	40 218	10.2	25.3
Calhoun	S	S	S	S	S	S	S	S	S	.05	.56	.80	3 000	3.1	2.74	2 913	11.1	18.8
Clay	S	S	S	S	S	S	S	S	S	.03	.03	.86	3 700	.3	3.09	3 664	[illegible]	18.4
Doddridge	S	S	S	S	S	S	S	S	S	.11	.05	.61	2 700	6.5	2.79	2 572	7.7	21.2
Fayette	7.0	16.8	15.6	14.9	11.8	8.9	10.8	8.5	5.6	.08	.24	.80	20 100	1.3	2.75	19 861	10.9	21.0
Gilmer	S	S	S	S	S	S	S	S	S	.23	.14	.49	2 900	4.4	2.71	2 807	8.4	21.2
Grant	S	S	S	S	S	S	S	S	S	.05	.11	.87	3 400	-4.4	2.90	3 519	7.7	18.0
Greenbrier	6.6	15.3	14.5	16.6	13.6	9.9	9.1	8.3	6.2	.07	.14	.55	14 500	6.9	2.64	13 535	9.1	21.7
Hampshire	S	S	S	S	S	S	S	S	S	.07	.17	.43	5 800	12.1	2.73	5 153	8.2	20.4
Hancock	6.9	15.5	14.4	15.7	12.0	11.3	11.2	8.3	4.7	.09	.27	.58	14 900	4.4	2.69	14 253	8.7	19.3
Hardy	S	S	S	S	S	S	S	S	S	.08	.02	.71	3 700	2.7	2.69	3 576	9.4	19.6
Harrison	7.2	14.2	15.1	15.2	12.0	9.7	11.4	9.3	6.1	.06	.18	1.17	29 200	2.6	2.58	28 434	9.9	22.6
Jackson	7.9	15.4	15.1	15.4	14.6	11.3	9.4	6.3	4.6	.06	.11	.43	9 400	8.1	2.78	8 710	6.7	15.7
Jefferson	8.4	14.5	19.4	15.4	12.9	9.5	9.4	6.9	3.8	.13	.23	.81	11 200	12.6	2.78	9 960	8.8	18.6

[1] Hispanic persons may be of any race. [2] No spouse present. [3] Householder living alone.

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Table B. Counties — Population Characteristics and Households

County	Population characteristics—Con.												Households					
	1984—Con.									1980			1985			1980		
	Percent—									Percent—							Percent—	
	Under 5 years	5 to 14 years	15 to 24 years	25 to 34 years	35 to 44 years	45 to 54 years	55 to 64 years	65 to 74 years	75 years and over	American Indian, Eskimo, and Aleut	Asian and Pacific Islander	Hispanic[1]	Number	Percent change, 1980-1985	Persons per household	Number	Female family householder[2]	One-person[3]
	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31
WEST VIRGINIA—Con.																		
Kanawha	6.4	13.8	15.3	17.9	12.8	10.1	10.9	7.9	5.0	.07	.44	.52	88 100	3.0	2.53	86 446	10.1	22.4
Lewis	S	S	S	S	S	S	S	S	S	.05	.32	.51	7 100	6.0	2.62	6 676	10.2	23.3
Lincoln	7.4	16.2	16.9	15.1	12.8	10.4	9.2	7.5	4.5	.06	.05	.88	7 400	−3.1	2.86	7 646	8.9	15.8
Logan	7.4	19.5	15.4	17.5	11.7	8.8	8.7	6.3	3.6	.08	.22	1.11	16 900	3.3	2.96	16 387	10.6	16.1
McDowell	7.1	20.2	16.6	15.3	11.6	8.7	9.3	7.2	3.9	.05	.09	1.00	15 500	−3.6	3.00	16 034	12.2	17.3
Marion	6.4	13.9	18.1	14.6	12.0	8.9	11.0	8.9	6.2	.14	.23	.70	24 800	1.8	2.58	24 409	9.6	23.6
Marshall	6.8	15.5	13.6	16.6	12.8	9.7	10.8	7.8	4.7	.07	.20	.88	14 500	.8	2.70	14 344	8.5	19.5
Mason	7.6	15.5	15.4	14.8	13.7	11.0	9.7	7.3	5.1	.04	.30	.40	9 400	.2	2.73	9 400	7.7	17.9
Mercer	6.8	15.1	15.5	16.1	12.1	9.4	10.8	8.5	5.6	.09	.34	.71	26 800	1.2	2.62	26 494	10.3	21.3
Mineral	7.0	15.0	16.6	14.9	13.9	9.1	10.7	7.9	4.8	.10	.19	.34	10 100	6.6	2.72	9 438	8.6	19.4
Mingo	8.0	19.8	17.1	17.2	12.3	8.1	8.7	5.5	3.3	.03	.10	.73	12 300	3.3	3.01	11 676	11.0	16.7
Monongalia	6.5	11.2	28.3	17.5	11.5	7.9	7.5	5.6	3.9	.11	1.00	.74	30 200	11.3	2.48	27 100	7.4	24.6
Monroe	S	S	S	S	S	S	S	S	S	.13	.13	.80	4 300	−4.0	2.77	4 440	8.4	18.2
Morgan	S	S	S	S	S	S	S	S	S	.07	.10	.46	3 900	1.6	2.58	3 816	6.6	20.2
Nicholas	8.0	17.7	15.7	16.0	12.2	9.2	9.7	7.0	4.5	.05	.12	.46	9 900	4.4	2.86	9 470	8.8	16.8
Ohio	6.2	12.4	18.0	14.4	11.1	10.0	11.8	9.3	6.8	.08	.37	.50	23 000	.1	2.45	22 938	10.5	27.3
Pendleton	S	S	S	S	S	S	S	S	S	.05	.21	.78	2 900	2.8	2.89	2 815	8.0	20.9
Pleasants	S	S	S	S	S	S	S	S	S	.02	.02	.47	2 800	4.9	2.75	2 707	9.1	18.9
Pocahontas	S	S	S	S	S	S	S	S	S	.15	.13	.56	3 700	4.4	2.57	3 562	8.7	21.6
Preston	8.0	17.1	13.5	16.9	13.3	9.1	8.6	7.7	5.7	.15	.10	.67	10 400	1.8	2.88	10 252	7.9	18.9
Putnam	8.2	16.6	13.2	19.1	15.4	9.9	8.0	6.2	3.3	.08	.15	.51	14 600	12.6	2.84	12 972	6.7	14.1
Raleigh	7.4	17.4	14.1	17.4	12.8	8.6	9.8	7.7	4.9	.07	.40	.63	30 900	2.4	2.75	30 154	10.0	19.5
Randolph	6.9	14.7	15.8	17.3	12.5	9.2	9.3	8.5	5.8	.13	.18	.78	10 100	4.2	2.70	9 682	8.6	20.7
Ritchie	S	S	S	S	S	S	S	S	S	.07	.04	.54	4 300	3.1	2.63	4 128	8.8	21.7
Roane	S	S	S	S	S	S	S	S	S	.42	.26	.74	5 800	5.7	2.65	5 510	8.4	19.2
Summers	S	S	S	S	S	S	S	S	S	.14	.14	1.30	5 000	−5.5	2.66	5 334	11.1	22.0
Taylor	S	S	S	S	S	S	S	S	S	.17	.14	.75	5 800	−.2	2.79	5 842	10.1	21.2
ker	S	S	S	S	S	S	S	S	S	.08	.08	.83	3 200	4.2	2.63	3 101	8.2	22.6
[illegible]	S	S	S	S	S	S	S	S	S	.04	.06	.27	4 000	1.3	2.82	3 924	6.7	19.9
r	7.1	15.7	18.8	16.8	12.9	7.8	8.5	7.0	5.5	.08	.19	.59	8 800	10.6	2.68	7 996	7.7	21.3
ne	7.8	16.7	15.4	16.1	12.6	10.5	9.5	7.0	4.4	.05	.13	.42	15 700	.2	2.86	15 648	8.7	16.1
Webster	S	S	S	S	S	S	S	S	S	.07	.06	.56	4 200	−.7	2.87	4 190	10.4	20.1
Wetzel	7.2	16.7	14.6	15.7	13.5	10.3	9.6	7.2	5.4	.06	.19	.47	8 000	4.7	2.74	7 607	8.4	20.2
Wirt	S	S	S	S	S	S	S	S	S	.02	.08	.71	1 800	−4.9	2.90	1 661	8.4	17.1
Wood	7.0	14.7	15.2	16.3	13.9	9.9	9.9	7.6	5.5	.06	.18	.43	35 400	4.7	2.60	33 822	9.0	20.9
Wyoming	8.7	19.0	17.6	17.4	12.8	8.5	8.1	5.4	2.6	.10	.12	.88	11 600	1.4	3.04	11 466	8.6	13.9
WISCONSIN	7.6	14.7	17.3	16.9	12.3	9.2	9.2	7.3	5.4	.63	.38	1.34	1 752 000	6.0	2.65	1 652 261	8.2	22.5
Adams	S	S	S	S	S	S	S	S	S	.67	.14	.78	5 400	10.7	2.45	4 839	5.4	21.7
Ashland	S	S	S	S	S	S	S	S	S	6.42	.25	.29	6 100	−.2	2.62	6 103	8.2	27.2
Barron	8.8	15.2	14.8	15.3	11.6	8.5	9.6	9.0	7.1	.39	.11	.34	14 700	6.8	2.71	13 770	6.1	20.9
Bayfield	S	S	S	S	S	S	S	S	S	6.88	.21	.34	5 400	5.9	2.62	5 110	6.0	23.0
Brown	8.1	15.7	18.9	18.4	12.9	8.6	7.5	5.8	4.2	1.39	.32	.52	66 600	11.2	2.70	59 908	8.1	22.2
Buffalo	S	S	S	S	S	S	S	S	S	.13	.13	.15	5 300	6.8	2.67	4 982	6.0	20.5
Burnett	S	S	S	S	S	S	S	S	S	3.23	.12	.19	5 100	11.4	2.61	4 558	6.2	20.4
Calumet	9.4	17.9	17.6	17.0	12.8	8.4	7.3	5.7	4.0	.34	.26	.34	11 200	15.3	3.06	9 694	5.4	16.0
Chippewa	8.6	17.3	14.8	16.2	12.4	8.1	8.5	7.3	5.7	.17	.19	.27	18 300	6.5	2.85	17 180	6.8	20.0
Clark	9.0	16.6	13.1	14.4	11.7	9.3	9.9	8.7	7.1	.20	.13	.31	11 600	5.1	2.81	11 027	5.0	21.7
Columbia	7.6	15.1	12.6	17.3	12.6	9.5	9.6	8.4	6.9	.25	.10	.50	16 800	8.4	2.64	15 534	6.4	22.1
Crawford	S	S	S	S	S	S	S	S	S	.12	.11	.26	6 000	4.8	2.73	5 720	6.2	23.1
Dane	6.7	12.2	23.0	20.8	12.9	8.2	7.3	5.0	3.8	.23	1.02	1.01	134 500	11.6	2.42	120 601	7.4	25.6
Dodge	8.3	15.9	14.3	16.3	12.2	9.1	9.9	7.9	6.0	.20	.20	.80	25 800	3.7	2.82	24 851	5.5	19.1
Door	7.7	14.9	14.6	15.0	12.4	8.7	10.0	10.1	6.7	.80	.20	.52	9 900	7.5	2.60	9 207	5.7	22.7
Douglas	7.5	14.8	15.3	16.2	11.8	9.0	10.0	8.9	6.6	1.31	.24	.31	16 200	−1.5	2.52	16 467	8.7	26.3
Dunn	7.5	13.9	26.8	14.5	11.0	7.0	7.4	6.5	5.4	.25	.36	.27	11 500	4.4	2.75	11 047	5.1	20.1
Eau Claire	7.3	13.8	23.6	16.8	11.5	7.4	8.2	6.6	4.8	.36	.36	.33	29 900	9.0	2.62	27 330	6.0	22.7
Florence	S	S	S	S	S	S	S	S	S	.34	.19	.34	1 500	−1.8	2.74	1 484	6.0	22.1
Fond du Lac	8.3	16.1	15.3	16.3	12.8	8.9	9.4	7.2	6.8	.21	.16	.85	31 500	5.5	2.77	29 870	6.9	20.5
Forest	S	S	S	S	S	S	S	S	S	6.52	.18	.26	3 300	8.2	2.72	3 025	7.4	19.7
Grant	8.3	14.7	21.5	14.4	10.4	8.5	8.7	7.2	8.3	.10	.19	.32	17 400	4.5	2.77	16 686	5.6	21.9
Green	8.4	15.4	14.7	16.7	11.8	9.3	9.8	8.0	8.2	.08	.20	.28	11 400	5.6	2.65	10 758	6.2	22.4
Green Lake	S	S	S	S	S	S	S	S	S	.12	.13	1.06	7 300	8.0	2.56	6 734	5.9	22.2
Iowa	9.0	16.8	14.1	16.7	11.6	9.3	9.8	7.5	5.5	.15	.14	.28	7 100	5.2	2.84	6 767	5.5	22.0
Iron	S	S	S	S	S	S	S	S	S	.18	.19	.24	2 500	−7.6	2.48	2 664	7.4	26.4
Jackson	S	S	S	S	S	S	S	S	S	2.94	.08	.26	6 100	.2	2.65	6 073	6.4	23.7
Jefferson	7.6	14.0	18.7	16.6	12.5	9.3	8.5	7.3	5.5	.10	.26	1.34	23 900	7.2	2.63	22 264	6.5	20.8
Juneau	8.0	17.3	11.7	13.8	11.9	9.3	11.2	10.3	6.5	.84	.14	.50	8 000	5.0	2.64	7 595	6.5	23.8
Kenosha	7.4	15.2	17.3	16.3	12.8	9.8	9.2	7.1	4.9	.28	.33	2.91	44 300	2.9	2.67	43 064	9.4	22.0
Kewaunee	8.8	17.2	14.8	15.8	11.3	8.2	9.5	8.7	5.9	.12	.08	.28	6 800	4.8	2.92	6 473	5.2	20.1
La Crosse	7.2	13.0	23.5	16.3	11.4	8.1	8.0	6.8	5.8	.30	.29	.38	34 700	6.4	2.57	32 017	7.8	23.6

[1]Hispanic persons may be of any race. [2]No spouse present. [3]Householder living alone.

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TABLE

YEARS OF SCHOOL COMPLETED
(PERSONS 18 YEARS OLD AND OLDER)

PLACE	0 TO 11 YEARS	4 YEARS HIGH SCHOOL	1 TO 3 YEARS COLLEGE	4 YEARS COLLEGE	5+ YEARS COLLEGE
WEST VIRGINIA	570857	524181	163018	72199	59456
BARBOUR	5470	4324	1158	513	387
BERKELEY	13977	12524	3358	1782	1339
BOONE	11317	7049	1249	468	320
BRAXTON	5029	3418	682	438	298
BROOKE	7551	10269	2774	1216	809
CABELL	27944	28057	13544	5085	4862
CALHOUN	3157	1965	442	189	100
CLAY	4468	2239	252	174	155
DODDRIDGE	2370	1904	426	240	191
FAYETTE	20179	13638	4290	1521	1208
GILMER	2716	1814	967	307	275
GRANT	3715	2430	485	273	233
GREENBRIER	12311	9611	2551	1363	1272
HAMPSHIRE	4540	3992	739	558	422
HANCOCK	10198	13448	2427	1231	835
HARDY	3799	2547	538	220	151
HARRISON	20971	23150	6766	3649	1925
JACKSON	7126	7417	2005	797	607
JEFFERSON	8452	7097	2898	1643	1352
KANAWHA	56948	66178	23619	13263	10602
LEWIS	6402	5164	1181	637	310
LINCOLN	8797	5360	903	333	359
LOGAN	17632	11960	2725	843	813
MCDOWELL	20256	9163	1576	819	757
MARION	16923	19539	6929	3065	1842
MARSHALL	11009	13530	2795	1241	807
MASON	8495	7908	1507	534	661
MERCER	23044	18135	6942	2851	2042
MINERAL	7000	8631	2259	642	569
MINGO	13668	7363	1577	729	588
MONONGALIA	15079	17882	12663	4669	7126
MONROE	4099	3425	923	343	316
MORGAN	3326	2951	647	273	403
NICHOLAS	9264	7202	1368	775	327
OHIO	14649	19334	7288	3035	2506
PENDLETON	2806	2075	456	254	163
PLEASANTS	2399	2407	522	237	164
POCAHONTAS	3614	2418	508	336	273
PRESTON	9799	8359	1591	680	606
PUTNAM	9461	11685	2842	1295	1250
RALEIGH	26840	21814	7025	2977	2050
RANDOLPH	8891	7604	2231	1161	748
RITCHIE	3636	3210	711	208	217
ROANE	5638	4255	771	366	323
SUMMERS	5859	4068	1031	378	283
TAYLOR	4900	4878	1042	466	355
TUCKER	2753	2486	490	199	222
TYLER	3195	3403	743	298	226
UPSHUR	6267	6498	2431	1011	634
WAYNE	14921	11778	3137	1085	941
WEBSTER	5109	2250	451	291	144
WETZEL	5957	6601	1242	766	540
WIRT	1501	1367	305	169	56
WOOD	22154	28234	9485	3803	2985
WYOMING	12954	8128	1419	531	504

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TABLE 4

DISTRIBUTION OF HOUSEHOLDS BY INCOME IN 1979

PLACE	<$5000	$5000-$9999	$10000-$12499	$12500-$14999	$15000-$17499	$17500-$19999	$20000-$24999	$25000-$29999	$30000-$39999	$40000-$49999	$50000-$74999	$75000-OR MORE	MEDIAN INCOME	MEAN INCOME
WEST VIRGINIA	111021	130699	60658	69830	51914	67072	84873	57698	96068	19960	12215	5230	16584	17329
BARBOUR	1111	1268	565	495	395	682	569	382	306	79	61	1	11596	14133
BERKELEY	2477	2095	1303	1212	1350	1059	2007	1557	1487	681	231	165	15190	18007
BOONE	1518	1732	735	674	678	767	1647	976	827	297	142	69	16362	11749
BRAXTON	1235	1140	547	316	298	324	496	265	195	72	11	15	10286	12618
BROOKE	1212	1397	853	601	762	986	1612	1490	1376	659	230	57	19000	20329
CABELL	6505	8019	3643	2955	3025	2313	6597	3272	3466	1402	766	637	14306	17950
CALHOUN	689	779	299	216	218	193	236	133	117	26	17	17	10003	12594
CLAY	1068	810	467	257	251	249	309	108	96	16	12	19	9835	11810
DODDRIDGE	568	815	325	198	188	150	198	143	117	62	15	0	10704	12910
FAYETTE	3130	4791	1083	1574	1516	1281	2253	1350	1357	606	102	70	12566	15759
GILMER	681	711	257	253	187	158	324	68	78	39	52	13	10063	13046
GRANT	754	765	371	339	248	172	403	218	168	67	65	9	11075	13950
GREENBRIER	2385	3142	1421	973	985	915	1579	856	889	306	200	89	12197	15626
HAMPSHIRE	931	1171	605	373	646	312	551	266	300	85	71	29	11926	14734
HANCOCK	1565	1850	879	787	813	934	1840	1760	2316	823	937	116	20701	22556
HARDY	761	778	306	366	277	259	390	198	116	25	27	16	11577	13555
HARRISON	4809	5618	2613	2196	2265	1965	3309	2158	1971	668	685	233	13796	18001
JACKSON	1442	1281	562	432	672	539	1221	911	1000	337	177	52	17723	19969
JEFFERSON	1108	1872	908	866	936	788	1227	908	923	323	160	70	15803	18279
KANAWHA	11115	13705	6744	5702	6372	6149	11667	8511	9408	3727	2376	1039	17291	20097
LEWIS	1368	1492	511	590	548	688	695	609	355	33	89	66	12303	14531
LINCOLN	1722	1500	688	680	628	559	873	515	353	122	52	22	11798	13937
LOGAN	2504	3106	1688	1203	1292	1191	2009	1396	1329	398	322	170	14513	17354
MCDOWELL	2913	3694	1641	1196	1037	952	1933	1212	965	298	156	76	12091	14897
MARION	3878	4529	2226	2015	1828	1768	2979	2058	1997	633	327	123	14618	16796
MARSHALL	1891	2328	1075	831	1107	1027	2198	1501	1809	473	199	77	17331	18996
MASON	1478	1729	826	651	789	706	1242	699	793	299	179	29	15082	17393
MERCER	6223	5403	2663	1780	2102	1832	3175	1995	1910	762	620	222	13041	17209
MINERAL	1532	1737	820	739	865	888	1126	696	750	199	188	30	14662	16309
MINGO	2549	2612	987	898	863	706	1366	867	816	235	189	73	12541	15914
MONONGALIA	4820	5697	2348	1988	1714	1595	2968	1901	2270	1008	509	306	13371	17540
MONROE	878	1033	590	389	306	270	495	277	205	20	2	8	11388	13639
MORGAN	687	769	309	340	317	218	678	365	230	81	61	31	13032	17381
NICHOLAS	1597	1947	861	789	661	765	1125	756	668	118	136	89	13965	16034
OHIO	3834	4117	1806	1753	1606	1568	2757	2070	2081	595	637	302	15083	18590
PENDLETON	523	791	247	323	207	160	276	93	129	11	16	6	10956	12927
PLEASANTS	429	670	215	150	184	265	612	219	245	66	62	15	16182	17177
POCAHONTAS	694	750	353	201	326	263	367	185	221	88	31	26	12355	15049
PRESTON	1966	2103	915	827	783	831	1169	764	552	132	202	61	12079	15462
PUTNAM	1614	1737	911	843	1691	942	2047	1606	1570	461	217	70	10186	19144
RALEIGH	6143	5966	2736	2215	2333	2265	3961	2788	2369	735	639	266	15151	17590
RANDOLPH	1762	1998	1023	793	796	710	1080	611	501	206	136	77	12801	16251
RITCHIE	846	986	431	339	333	293	353	228	231	52	27	19	11381	13942
ROANE	1098	1285	526	463	450	400	561	310	206	31	78	21	11623	14022
SUMMERS	1107	1302	408	429	670	323	651	303	198	69	90	67	10730	13955
TAYLOR	1086	1212	587	506	527	351	646	415	331	101	88	17	12678	14830
TUCKER	608	735	359	195	282	214	331	147	181	32	71	17	11922	14099
TYLER	628	747	312	275	234	299	571	659	297	56	65	23	15107	16784
UPSHUR	1474	1625	749	838	654	632	942	520	693	166	58	34	13776	15208
WAYNE	2907	2891	1325	1187	1169	1047	1049	1370	1200	301	258	52	13951	16659
WEBSTER	1014	1089	403	323	343	239	343	165	121	37	26	14	9801	12156
WETZEL	1333	1204	575	407	505	429	1027	888	868	199	115	40	16149	17920
WIRT	309	413	126	100	179	122	221	80	93	13	17	0	12222	13018
WOOD	6581	5358	2888	2305	2589	2506	4719	3169	3247	1020	819	322	16503	18068
WYOMING	1891	1027	968	718	880	725	1004	1209	920	256	161	50	15470	17202

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FAMILIES BELOW POVERTY LEVEL IN 1979 BY PRESENCE AND AGE OF RELATED CHILDREN

PLACE	FAMILIES					FAMILY WITH FEMALE HOUSEHOLDER NO HUSBAND PRESENT				
	WITH RELATED CHILDREN					WITH RELATED CHILDREN				
	TOTAL	<6 AND 6 TO 17	<6 ONLY	6 TO 17 ONLY	WITHOUT RELATED CHILDREN	TOTAL	<6 AND 6 TO 17	<6 ONLY	6 TO 17 ONLY	WITHOUT RELATED CHILDREN
WEST VIRGINIA	43140	11825	10597	20718	19120	15969	3812	3681	9240	3321
BARBOUR	499	118	126	265	196	145	28	15	102	59
BERKELEY	1017	295	277	445	326	403	66	139	198	107
BOONE	763	196	205	362	270	270	30	81	159	39
BRAXTON	491	99	96	296	326	122	21	27	74	71
BROOKE	433	141	84	208	86	250	70	59	121	16
CABELL	1954	531	541	882	809	806	219	215	372	170
CALHOUN	290	75	56	159	109	109	14	29	52	71
CLAY	563	171	91	281	245	136	36	35	63	42
DODDRIDGE	245	77	55	113	82	61	5	13	43	7
FAYETTE	1506	400	356	788	481	617	160	121	336	69
GILMER	187	31	60	96	192	63	12	10	41	10
GRANT	323	107	68	148	239	78	14	29	35	41
GREENBRIER	792	180	253	359	497	243	50	62	131	65
HAMPSHIRE	362	99	59	186	199	119	31	23	65	12
HANCOCK	457	134	104	219	278	251	73	62	116	42
HARDY	293	65	66	162	212	89	14	26	49	35
HARRISON	1654	554	482	618	835	610	159	198	253	113
JACKSON	480	93	135	252	354	156	19	20	117	52
JEFFERSON	579	144	151	284	175	230	35	55	140	26
KANAWHA	3679	959	1068	1652	1659	1630	376	435	819	391
LEWIS	424	93	76	255	204	167	14	37	116	58
LINCOLN	925	229	195	501	392	219	41	75	103	84
LOGAN	1456	475	366	615	523	460	138	71	251	117
MCDOWELL	1975	633	436	906	538	695	187	170	338	104
MARION	1252	301	339	612	523	616	74	93	267	107
MARSHALL	582	111	134	337	297	260	35	60	165	35
MASON	489	136	126	227	292	162	41	32	89	33
MERCER	1712	448	377	887	681	658	136	181	341	112
MINERAL	659	112	189	358	225	265	35	74	136	65
MINGO	1474	464	305	705	544	577	159	99	320	67
MONONGALIA	890	227	301	362	537	272	55	71	146	67
MONROE	414	133	50	231	212	93	26	2	65	14
MORGAN	245	45	61	139	145	49	1	9	38	5
NICHOLAS	768	262	157	349	252	183	59	43	81	12
OHIO	1046	150	324	572	411	602	82	171	309	85
PENDLETON	274	63	61	150	96	72	7	12	53	16
PLEASANTS	160	36	61	63	87	42	8	15	19	39
POCAHONTAS	186	41	52	93	121	72	9	9	54	22
PRESTON	797	262	181	354	466	186	74	16	96	63
PUTNAM	558	142	136	280	363	203	36	63	104	60
RALEIGH	1784	554	359	871	724	646	205	127	314	133
RANDOLPH	675	177	174	324	316	239	32	72	111	36
RITCHIE	297	89	73	135	142	120	19	29	72	70
ROANE	372	125	81	166	277	83	26	5	52	52
SUMMERS	560	175	150	235	259	207	48	57	87	27
TAYLOR	371	107	86	178	163	130	32	25	72	20
TUCKER	226	50	61	115	102	76	12	12	52	16
TYLER	256	60	78	118	112	73	24	16	33	15
UPSHUR	517	146	95	276	265	180	43	13	124	65
WAYNE	1408	426	333	649	624	406	116	112	170	100
WEBSTER	557	151	123	283	156	142	27	42	73	13
WETZEL	348	102	67	179	298	126	31	14	77	51
WIRT	118	13	20	85	96	21	0	0	21	25
WOOD	1604	452	431	719	557	718	199	217	307	114
WYOMING	1163	339	206	618	633	310	79	81	190	60

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TABLE 6

PROGRAM RECOMMENDATIONS FOR THE RETRAINING OF UNEMPLOYED WORKERS IN WEST VIRGINIA

RANKING OF OCCUPATIONS PROJECTED TO HAVE SUFFICIENT JOB OPENINGS TO JUSTIFY TRAINING PROGRAMS

. Sales Clerk
2. General Clerk, Office
3. Janitor, Porter or Cleaner
4. Food Worker, Fast Food Restaurant
5. Secretary
6. Cashier
7. Waiter or Waitress
8. Bookkeeper
9. Sales Representative, Agent, Associate
10. Nurse Aide or Orderly
11. Nurse, Professional
12. Guard/Security Workers
13. Manager, Retail Store
14. Truck Driver, General Classification
15. Carpenter
16. Maid
17. Electrician
18. Kitchen Helper
19. Stock Clerk or Storekeeper
20. Cook, Short Order or Specialty Fast Food
21. Stock Handler
22. Maintenance Repairer, General Utility
23. Cook, Institution or Cafeteria
24. Licensed Practical Nurse
25. Mechanic, Automotive
26. Machinist/Machine Operator Metal
27. Typist
28. Receptionist
29. Accountant or Auditor
30. Food and Beverage Manager
31. Bank Teller
32. Cook, Restaurant
33. Welder and Flamecutter
34. Counter Clerk, Except Food
35. Buyer, Retail or Wholesale Trade
36. Clerical Supervisor
37. Driller, Earth
38. Supervisor, Blue Collar Worker
39. Maintenance Mechanic
40. Wholesaler
41. Bookkeeping or Billing Machine Operator
42. Carpenter Helper
43. Hairdresser or Cosmetologist
44. File Clerk
45. Butcher or Meatcutter
46. Key Punch or Data Entry Operator
47. Payroll or Timekeeping Clerk
48. Electrical or Electronic Technician
49. Radiologic Technologist or Technician
50. Diesel Mechanic
51. Drafter
52. Roustabout
53. Insurance Clerk, Medical
54. Dental Assistant
55. Engineering Equip. Mechanic
56. Insulation Worker
57. Medical Assistant
58. Air Conditioning, Heating, Refrigeration Mechanic
59. Credit Clerk
60. Computer or Peripheral Equipment Operator
61. Automotive Body Repairer
62. Medical Lab Technician
63. Sales Clerk Supervisor
64. Dental Hygienist
65. Medical Lab Technologist
66. Collector, Bill and Acco
67. Recreation Facility Attendant
68. Deckhand, River Transportation
69. Surgical Technician
70. Computer Programmer
71. Electric Motor Repairer
72. Systems Analyst, Electro Data Processing
73. Dental Lab Technician
74. Household Appliance Mechanic or Installer
75. Insulation Worker Helper
76. Respiratory Therapist
77. Claim Examiner, Life, Accident, or Health
78. Radio and TV Repairer
79. Electrocardiograph Tech.
80. Office Machine or Data Processing Machine Rep
81. Optician, Dispensing or Optical Mechanic
82. Truck Driver Helper

ALPHABETICAL LIST OF OCCUPATIONS WITH PROJECTED JOB OPENINGS TOO SMALL TO JUSTIFY TRAINING PROGRAMS

83. Alteration Tailor
84. Auxiliary Equip. Operator
85. Bagger
86. Barber
. Bartender
. Boilermaker
89. Bricklayer Helper
90. Brickmasons or Stonemasons
91. Cable TV Installers
92. Carpet Cutter or Carpet Layer
93. Car Repairer, Railroad
94. Caseworker
95. Cement Mason
96. Claims Taker, Unemployment Benefit
97. Clothing Ironer and Presser
98. Coal Mining Occupations
99. Construction Inspector
100. Crane, Derrick, Hoist Oper.
101. Delivery/Route Worker
102. Designer
103. Dispatcher, Starter, Veh.
104. Dry Wall Installer, Lather
105. Electric Powerline Install./Repairer
106. Eligibility Worker Welfare
107. Employment Interviewer
108. Fire Fighter
109. Floor Worker
110. Freight, Material Handler
111. Furnace Operator Helper or Heater Helper
112. Furnace Tender, Smelter, Pourer
113. Furnace Tender, Stocker, Except Metal
114. Garage Worker/Gas Station Attendant
115. Gardner, Groundskeeper Except Farm
117. Heavy Equipment Operator
118. Industrial Truck Operator
119. Inspector, Except Const.
120. Instrument Repairer
121. Lathe/Turning Machine Operator, Metal
122. Laundry, Drycleaning Operator, Nec.
123. Lumber Grader
124. Mail Clerk
125. Manager, Auto Parts Dept.
126. Manager, Auto Serv. Dept.
127. Marking Clerk
128. Millwright
129. Misc. Machine Operator, Chemical Product
130. Mixer and/or Blender, Chem.
131. Oiler
132. Painter, Construction
133. Painter, Manuf. Articles
134. Personnel Clerk
135. Personnel and Labor Relation Specialist
136. Physical Science Tech.
137. Pipelayer
138. Plumber/Pipefitter
139. Police and Detective Supv.
140. Postal Service Clerk
141. Press and Plate Printer
142. Production Clerk
143. Production Packager, Hand or Machine
144. Psychiatric Aide
145. Public Rels. Spec.
146. Pumping Station Oper.
147. Purchasing Agent, Buyer
149. Reinforcing-Iron Wkr.
150. Rigger
151. Roller and Finisher, Metal
152. Roofer
153. Roofer Helper
154. Sales Agent, Real Est.
155. Sawyer
156. Sewage-Plant Operator
157. Sewer or Stitcher
158. Sheet Metal Worker, Tinsmith
159. Shipping and Receiving Occups.
160. Social Service Aide
161. Statement Clerk
162. Stationary Engineer
163. Statistical Clerk
164. Stenographer
165. Structural Steel Worker Metal Fabrication
166. Surveyor
167. Surveyor Helper
168. Teacher Aide and Educ. Assistant
169. Telephone Installer, Repairer
170. Telephone Operator
171. Timbercutting, Logging Wkr.
172. Underwriter
173. Water Treatment Plant Operator
174. Weigher

ANTICIPATED NEW AND EMERGING OCCUPATIONS/SKILLS

175. Case Mgr. for Mentally Disabled
176. Child Advocate Worker
177. Clinical Arrival Tech.
178. Computer-Assisted Design Worker
179. Computer-Assisted Manufact. Wkr.
. Crystal Manufacturing Occupations
181. Dialysis Technician
182. Electronics Mechanics
183. Energy Efficiency Tech.
184. Fiber Optics Worker
185. Geriatric & Gerontological Workers
186. Geriatric Social Work
187. Halfway House Resident Manager
188. New Synthetic Materials Handler
189. Hazardous-Waste Occup.
190. Histologic Technician
191. Housing Rehabilitation Specialist
192. Industrial Hygiene Tech.
193. Industrial-Laser Processor
194. Industrial-Robot Prod.
195. Laser/Electro-Optics Technician
196. Laser, Holographic Optical Fiber Maint.
197. Medical Electronics Tech.
198. Microprocessor-Related Occupations
199. Nuclear Quality Assurance Inspector
200. On-Line Emergency Medical
201. Physical Security Technician
202. Pediatric Assist.
203. Public Safety Communications Operator
204. Robotics Occups.
205. Therapeutic Recreation Tech.

*Primary Data Source is: Private Industry Council of West Virginia. 1982. Projections to 1990 by Occupations and Industry. West Virginia.

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TABLE 7

TWENTY FASTEST GROWING OCCUPATIONS

1982 - 1995

Occupation	Percent Change	Employment Change (thousands)	Percent of Total Job Growth
Computer service technicians	97	53	0.21
Legal assistants	94	43	0.17
Computer systems analysts	85	217	0.85
Computer programmers	77	205	0.80
Computer operators	76	160	0.62
Office machine repairers	72	40	0.16
Physical therapy assistants	68	26	0.09
Electrical engineers	65	209	0.82
Civil engineering technicians	64	23	0.09
Peripheral electronic data-processing equipment operators	64	31	0.12
Insurance clerks, medical	62	53	0.21
Electrical and electronics technicians	61	222	0.87
Occupational therapists	60	15	0.06
Surveyor helpers	59	23	0.09
Credit clerks, banking and insurance	54	27	0.11
Physical therapists	54	25	0.10
Employment interviewers	53	30	0.12
Mechanical engineers	52	109	0.43
Mechanical engineering technicians	52	25	0.10
Compression and injection mold machine operators, plastics	50	47	0.19

Note: Includes only detailed occupations with 1982 employment of 25,000 or more. Data for 1995 are based on moderate-trend projections

Source: Table compiled from George T. Silvestri *et al.*, "Occupational Employment Projections Through 1995," *Monthly Labor Review*, Vol. 106, No. 11, November 1983, Table 3, p. 45.

TABLE 8

SOME JOBS ARE GOING. . .

Occupation	Percent Decline in Employment
Shoemaking-machine operators	-19.2
Farm laborers	19.0
Railroad-car repairers	17.9
Graduate assistants	16.7
Housekeepers, private household	14.9
Child-care workers, private household	14.8
Maids and servants, private household	14.7
Farm supervisors	14.3
Farmers, owners and tenants	13.7
Timber-cutting and logging workers	13.6
Secondary-school teachers	13.1

OTHERS ARE GROWING. . .

Occupation	Percent Growth in Employment
Data-processing-machine mechanics	+157.1
Paralegal personnel	143.0
Computer-systems analysts	112.4
Computer operators	91.7
Office-machine servicers	86.7
Tax preparers	77.9
Computer programmers	77.2
Aero-astronautic engineers	74.8
Employment interviewers	72.0
Fast-food restaurant workers	69.4
Child-care attendants	66.5
Veterinarians	66.1

BUT THE FUTURE IS HERE. . .

Occupation	Estimated Employment by 1990
Industrial-robot production	800,000
Geriatric social work	700,000
Energy technicians	650,000
Industrial-laser processing	600,000
Housing rehabilitation	500,000
Handling new synthetic	400,000
On-line emergency medical	400,000
Hazardous-waste management	300,000
Genetic engineering	250,000
Bionic medical electronics	200,000
Laser, holographic and optical-fiber maintenance	200,000

Sources: Bureau of Labor Statistics, Forecasting International, Ltd., Occupational Forecasting, Inc.

TABLE 9

FORTY OCCUPATIONS WILL ACCOUNT FOR ABOUT HALF OF ALL NEW JOBS GENERATED

1982 - 1995

Occupation	Employment Change (thousands)	Percent Change	Percent of Total Job Growth
All occupations	25,600	25	100.0
Building custodians	780	28	3.0
Cashiers	740	47	2.9
Secretaries	720	30	2.8
General clerks, office	700	30	2.7
Sales clerks	690	24	2.7
Nurses, registered	640	49	2.7
Waiters and waitresses	560	34	2.2
Teachers, kindergarten and elementary	510	37	2.0
Truck drivers	430	27	1.7
Nursing aides and orderlies	420	35	1.7
Sales representatives, technical	390	29	1.5
Accountants and auditors	340	40	1.3
Automotive mechanics	320	38	1.3
Supervisors of blue-collar workers	320	27	1.2
Kitchen helpers	300	36	1.2
Guards and doorkeepers	300	47	1.2
Food preparation and service workers, fast food restaurants	300	37	1.2
Managers, store	290	30	1.1
Carpenters	250	29	1.0
Electrical and electronic technicians	220	61	0.9
Licensed practical nurses	220	37	0.9
Computer systems analysts	220	85	0.8
Electrical engineers	210	65	0.8
Computer programmers	210	77	0.8
Maintenance repairers, general utility	190	28	0.8
Helpers, trades	190	31	0.7
Receptionists	190	49	0.7
Electricians	170	32	0.7
Physicians	160	34	0.7
Clerical supervisors	160	35	0.6
Computer operators	160	76	0.6
Sales representatives, nontechnical	160	27	0.6
Lawyers	160	34	0.6
Stock clerks, stockroom and warehouse	160	19	0.6
Typists	160	16	0.6
Delivery and route workers	150	19	0.6
Bookkeepers, hand	150	18	0.6
Cooks, restaurants	150	42	0.6
Bank tellers	140	30	0.6
Cooks, short order, specialty, and fast food	140	32	0.6

Note: Includes only detailed occupations with 1982 employment of 25,000 or more Data for 1995 are based on moderate-trend projections

Source: Table compiled from George T. Silvestri *et al.*, "Occupational Employment Projections Through 1995," *Monthly Labor Review*, Vol 106, No. 11, November 1983, Table 2, p. 45.

PUBLIC SCHOOL NET ENROLLMENT 1986-87

	Total Elementary			Total Secondary		
County	Boys	Girls	Total	Boys	Girls	Total
Barbour	1.146	1.061	2.207	474	487	961
Berkeley	3.495	3.264	6.759	1.373	1.392	2.765
Boone	2.087	1.947	4.034	1.185	1.123	2.308
Braxton	1.059	957	2.016	441	388	829
Brooke	1.723	1.555	3.278	842	789	1.631
Cabell	4.423	4.177	8.600	3.834	3.622	7.456
Calhoun	580	553	1.133	311	267	578
Clay	725	636	1.361	555	567	1.122
Doddridge	511	469	980	246	217	463
Fayette	3.916	3.491	7.407	1.694	1.601	3.295
Gilmer	517	462	979	211	178	389
Grant	540	522	1.062	526	475	1.001
Greenbrier	1.818	1.685	3.503	1.546	1.525	3.071
Hampshire	800	737	1.537	724	672	1.396
Hancock	1.565	1.529	3.094	1.659	1.494	3.153
Hardy	580	549	1.129	391	376	767
Harrison	3.792	3.603	7.395	3.079	2.807	5.886
Jackson	1.881	1.660	3.541	786	782	1.568
Jefferson	1.901	1.638	3.539	1.366	1.292	2.658
Kanawha	10.701	9.795	20.496	8.536	8.049	16.585
Lewis	940	836	1.776	844	740	1.584
Lincoln	1.488	1.341	2.829	1.075	1.121	2.196
Logan	3.027	2.825	5.852	2.417	2.419	4.836
Marion	3.240	3.065	6.305	1.954	1.917	3.871
Marshall	1.853	1.774	3.627	1.678	1.571	3.249
Mason	1.475	1.359	2.834	1.160	1.081	2.241
Mercer	3.525	3.340	6.865	2.994	2.914	5.908
Mineral	1.776	1.625	3.401	949	804	1.753
Mingo	2.511	2.246	4.757	1.971	1.876	3.847
Monongalia	2.835	2.670	5.505	2.429	2.305	4.734
Monroe	600	572	1.172	531	521	1.052
Morgan	583	544	1.127	525	490	1.015
McDowell	3.199	3.030	6.229	1.674	1.687	3.361
Nicholas	1.591	1.453	3.044	1.297	1.215	2.512
Ohio	1.832	1.703	3.535	1.661	1.599	3.260
Pendleton	517	440	957	221	200	421
Pleasants	594	482	1.076	229	253	482
Pocahontas	592	496	1.088	253	218	471
Preston	1.796	1.565	3.361	1.466	1.370	2.836
Putnam	2.985	2.704	5.689	1.230	1.220	2.450
Raleigh	4.902	4.496	9.398	3.573	3.477	7.050
Randolph	1.444	1.352	2.796	1.178	1.158	2.336
Ritchie	735	689	1.424	297	308	605
Roane	1.020	930	1.950	691	592	1.283
Summers	751	646	1.397	508	506	1.014
Taylor	1.089	945	2.034	439	466	905
Tucker	518	479	997	260	255	515
Tyler	762	682	1.444	374	321	695
Upshur	1.718	1.530	3.248	720	698	1.418
Wayne	3.143	2.897	6.040	1.631	1.563	3.194
Webster	822	851	1.673	400	370	770
Wetzel	1.418	1.290	2.708	748	731	1.479
Wirt	320	273	593	278	250	528
Wood	4.491	4.129	8.620	3.843	3.681	7.524
Wyoming	2.787	2.666	5.453	1.192	1.117	2.309
Total	106.639	98.215	204.854	72.469	69.117	141.586

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TABLE 11

PUBLIC HIGH SCHOOL GRADUATES 1986-87

County	Boys	Girls	Total
Barbour	99	96	195
Berkeley	270	294	564
Boone	164	185	349
Braxton	79	83	162
Brooke	176	205	381
Cabell	547	505	1.052
Calhoun	50	47	97
Clay	73	79	152
Doddridge	49	40	89
Fayette	303	303	606
Gilmer	49	52	101
Grant	58	77	135
Greenbrier	221	234	455
Hampshire	101	109	210
Hancock	216	221	437
Hardy	75	64	139
Harrison	436	430	866
Jackson	176	168	344
Jefferson	246	183	429
Kanawha	1.179	1.249	2.428
Lewis	109	132	241
Lincoln	134	138	272
Logan	288	322	610
Marion	386	395	781
Marshall	248	236	484
Mason	168	183	351
Mercer	433	384	817
Mineral	218	187	405
Mingo	203	223	426
Monongalia	302	327	629
Monroe	78	76	154
Morgan	68	60	128
McDowell	217	258	475
Nicholas	189	145	334
Ohio	273	235	508
Pendleton	38	55	93
Pleasants	48	71	119
Pocahontas	66	47	113
Preston	210	225	435
Putnam	290	253	543
Raleigh	443	498	941
Randolph	152	164	316
Ritchie	65	73	138
Roane	97	86	183
Summers	55	59	114
Taylor	85	96	181
Tucker	52	62	114
Tyler	85	68	153
Upshur	138	132	270
Wayne	306	298	604
Webster	81	77	158
Wetzel	191	178	369
Wirt	47	34	81
Wood	610	590	1.200
Wyoming	244	226	470
Total	11.184	11.217	22.401

TABLE 12

CHURCH RELATED SCHOOLS
HIGH SCHOOL GRADUATES 1986-87

County	Boys	Girls	Total
Barbour	--	--	--
Berkeley	6	5	11
Boone	4	2	6
Braxton	--	--	--
Brooke	1	--	1
Cabell	28	32	60
Calhoun	--	--	--
Clay	--	--	--
Doddridge	--	--	--
Fayette	1	2	3
Gilmer	--	--	--
Grant	--	--	--
Greenbrier	10	5	15
Hampshire	--	--	--
Hancock	25	33	58
Hardy	--	--	--
Harrison	24	20	44
Jackson	5	5	10
Jefferson	--	--	--
Kanawha	47	45	92
Lewis	--	--	--
Lincoln	--	--	--
Logan	--	--	--
Marion	5	3	8
Marshall	25	23	48
Mason	1	5	6
Mercer	2	5	7
Mineral	--	--	--
Mingo	7	2	9
Monongalia	36	37	73
Monroe	6	6	12
Morgan	--	1	1
McDowell	--	1	1
Nicholas	--	--	--
Ohio	69	59	128
Pendleton	2	2	4
Pleasants	--	--	--
Pocahontas	--	--	--
Preston	1	2	3
Putnam	10	16	26
Raleigh	6	10	16
Randolph	3	5	8
Ritchie	1	1	2
Roane	1	6	7
Summers	--	--	--
Taylor	--	--	--
Tucker	--	--	--
Tyler	--	--	--
Upshur	3	5	8
Wayne	--	--	--
Webster	--	--	--
Wetzel	--	--	--
Wirt	--	--	--
Wood	22	22	44
Wyoming	1	--	1
Total	352	360	712

OTHER PRIVATE SCHOOLS
HIGH SCHOOL GRADUATES 1986-87

County	Boys	Girls	Total
Barbour	-	-	-
Berkeley	-	-	-
Boone	-	-	-
Braxton	-	-	-
Brooke	-	-	-
Cabell	-	-	-
Calhoun	-	-	-
Clay	-	-	-
Doddridge	-	-	-
Fayette	-	-	-
Gilmer	-	-	-
Grant	-	-	-
Greenbrier	-	-	-
Hampshire	-	-	-
Hancock	-	-	-
Hardy	-	-	-
Harrison	-	-	-
Jackson	-	-	-
Jefferson	-	-	-
Kanawha	-	-	-
Lewis	-	-	-
Lincoln	-	-	-
Logan	-	-	-
Marion	-	-	-
Marshall	-	-	-
Mason	-	-	-
Mercer	-	-	-
Mineral	-	-	-
Mingo	-	-	-
Monongalia	-	-	-
Monroe	-	-	-
Morgan	-	-	-
McDowell	-	-	-
Nicholas	-	-	-
Ohio	52	20	72
Pendleton	-	-	-
Pleasants	-	-	-
Pocahontas	-	-	-
Preston	-	-	-
Putnam	-	-	-
Raleigh	-	-	-
Randolph	-	-	-
Ritchie	-	-	-
Roane	-	-	-
Summers	-	-	-
Taylor	-	-	-
Tucker	-	-	-
Tyler	-	-	-
Upshur	-	-	-
Wayne	-	-	-
Webster	-	-	-
Wetzel	-	-	-
Wirt	-	-	-
Wood	-	-	-
Wyoming	-	-	-
Total	52	20	72

TABLE 14

COMPARISON OF ENROLLMENT FACTORS
AS OF SECOND SCHOOL MONTH
1987-88 to 1988-89

County	Net Enrollment			Certified Adult Students 1988-89	Net Enrollment w/Adult Students 1988-89	Certified Special Ed. Enrollment		
	1987-88	1988-89	Increase or (Decrease)			1987-88	1988-89	Increase or (Decrease)
Barbour	3.080	2.981	(99)	5.50	2.986.50	475	524	49
Berkeley	9.543	9.822	279	1.40	9.823.40	1.468	1.510	42
Boone	6.108	5.873	(235)	26.20	5.899.20	681	773	92
Braxton	2.872	2.819	(53)	-0-	2.819.00	701	622	(79)
Brooke	4.695	4.612	(83)	-0-	4.612.00	935	939	4
Cabell	15.374	15.038	(336)	23.60	15.061.60	2.731	2.622	(109)
Calhoun	1.712	1.697	(15)	17.36	1.714.36	429	332	(97)
Clay	2.417	2.404	(13)	-0-	2.404.00	321	388	67
Doddridge	1.367	1.337	(30)	1.19	1.338.19	269	255	(14)
Fayette	10.227	9.814	(413)	15.20	9.829.20	1.283	1.252	(31)
Gilmer	1.355	1.324	(31)	15.54	1.339.54	259	218	(41)
Grant	2.047	1.981	(66)	4.06	1.985.06	333	300	(33)
Greenbrier	6.335	6.127	(208)	-0-	6.127.00	969	875	(94)
Hampshire	2.836	2.920	84	0.80	2.920.80	466	503	37
Hancock	5.985	5.722	(263)	-0-	5.722.00	645	624	(21)
Hardy	1.821	1.833	12	1.01	1.834.01	364	375	11
Harrison	12.605	12.321	(284)	40.36	12.361.36	2.097	2.047	(50)
Jackson	5.197	5.151	(46)	7.94	5.158.94	990	979	(11)
Jefferson	6.043	6.031	(12)	-0-	6.031.00	848	863	15
Kanawha	35.102	34.244	(858)	36.70	34.280.70	5.750	6.289	539
Lewis	3.230	3.092	(138)	4.69	3.096.69	561	537	(24)
Lincoln	4.998	4.915	(83)	32.20	4.947.20	780	751	(29)
Logan	10.452	10.189	(263)	22.20	10.211.20	1.023	1.169	146
Marion	9.672	9.382	(290)	6.20	9.388.20	1.761	1.656	(105)
Marshall	6.610	6.327	(283)	-0-	6.327.00	1.217	1.447	230
Mason	4.872	4.848	(24)	13.60	4.861.60	738	745	7
Mercer	12.345	11.846	(499)	92.70	11.938.70	2.100	1.981	(119)
Mineral	4.809	4.726	(83)	6.10	4.732.10	1.146	924	(222)
Mingo	8.795	8.516	(279)	22.10	8.538.10	827	948	121
Monongalia	9.844	9.838	(6)	33.10	9.871.10	1.583	1.577	(6)
Monroe	2.127	2.136	9	5.80	2.141.80	450	460	10
Morgan	2.075	2.056	(19)	-0-	2.056.00	402	384	(18)
McDowell	9.243	8.587	(656)	151.20	8.738.20	1.321	1.207	(114)
Nicholas	5.372	5.232	(140)	9.40	5.241.40	1.023	909	(114)
Ohio	6.495	6.445	(50)	0.30	6.445.30	1.331	1.205	(126)
Pendleton	1.392	1.375	(17)	2.03	1.377.03	383	350	(33)
Pleasants	1.478	1.475	(3)	7.41	1.482.41	211	235	24
Pocahontas	1.565	1.539	(26)	0.10	1.539.10	325	302	(23)
Preston	5.916	5.831	(85)	6.10	5.837.10	1.070	1.045	(25)
Putnam	7.825	7.803	(22)	28.20	7.831.20	1.052	1.169	117
Raleigh	15.649	15.240	(409)	80.30	15.320.30	1.641	1.689	48
Randolph	4.894	4.847	(47)	12.10	4.859.10	1.043	934	(109)
Ritchie	1.899	1.846	(53)	0.67	1.846.67	295	259	(36)
Roane	3.143	3.176	33	9.26	3.185.26	699	621	(78)
Summers	2.345	2.295	(50)	9.20	2.304.20	422	397	(25)
Taylor	2.920	2.732	(188)	4.65	2.736.65	545	525	(20)
Tucker	1.443	1.391	(52)	0.20	1.391.20	301	300	(1)
Tyler	2.017	1.895	(122)	2.02	1.897.02	392	370	(22)
Upshur	4.481	4.359	(122)	3.51	4.362.51	706	703	(3)
Wayne	8.849	8.615	(234)	7.00	8.622.00	1.095	1.117	22
Webster	2.468	2.388	(80)	4.60	2.392.60	458	403	(55)
Wetzel	3.958	3.849	(109)	11.00	3.860.00	713	678	(35)
Wirt	1.041	1.037	(4)	-0-	1.037.00	201	191	(10)
Wood	15.416	15.222	(194)	0.70	15.222.70	3.317	3.139	(178)
Wyoming	7.603	7.255	(348)	72.70	7.327.70	961	851	(110)
Total	333.962	326.356	(7.606)	858.20	327.214.20	54.107	53.468	(639.)
			(2.28%)					(1.18%)

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TABLE 15

CHURCH RELATED SCHOOLS
NET ENROLLMENT SUMMARY 1986-87

	Total Elementary			Total Secondary			Grand Total		
County	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Barbour	4	4	8	1	1	2	5	5	10
Berkeley	159	170	329	27	40	67	186	210	396
Boone	26	23	49	14	6	20	40	29	69
Braxton	--	--	--	--	--	--	--	--	--
Brooke	108	111	219	3	3	6	111	114	225
Cabell	338	296	634	130	129	259	468	425	893
Calhoun	--	--	--	--	--	--	--	--	--
Clay	21	20	41	2	9	11	23	29	52
Doddridge	--	--	--	--	--	--	--	--	--
Fayette	142	127	269	9	16	25	151	143	294
Gilmer	--	--	--	--	--	--	--	--	--
Grant	1	5	6	--	--	--	1	5	6
Greenbrier	75	92	167	51	39	90	126	131	257
Hampshire	--	--	--	--	--	--	--	--	--
Hancock	261	261	522	114	107	221	375	368	743
Hardy	--	--	--	--	--	--	--	--	--
Harrison	162	164	326	120	103	223	282	267	549
Jackson	50	32	82	35	33	68	85	65	150
Jefferson	--	--	--	--	--	--	--	--	--
Kanawha	786	740	1526	184	198	382	970	938	1908
Lewis	43	23	66	--	--	--	43	23	66
Lincoln	--	--	--	--	--	--	--	--	--
Logan	--	--	--	--	--	--	--	--	--
Marion	362	352	714	42	47	89	404	399	803
Marshall	226	230	456	97	109	206	323	339	662
Mason	23	24	47	17	23	40	40	47	87
Mercer	86	109	195	30	48	78	116	157	273
Mineral	72	66	138	--	--	--	72	66	138
Mingo	174	140	314	18	24	42	192	164	356
Monongalia	120	155	275	112	117	229	232	272	504
Monroe	42	45	87	19	21	40	61	66	127
Morgan	9	7	16	6	6	12	15	13	28
McDowell	50	42	92	10	18	28	60	60	120
Nicholas	4	6	10	--	--	--	4	6	10
Ohio	483	478	961	223	226	449	706	704	1410
Pendleton	8	2	10	4	5	9	12	7	19
Pleasants	6	3	9	2	1	3	8	4	12
Pocahontas	24	22	46	5	6	11	29	28	57
Preston	12	10	22	13	13	26	25	23	48
Putnam	127	129	256	64	73	137	191	202	393
Raleigh	192	175	367	64	89	153	256	264	520
Randolph	44	41	85	11	19	30	55	60	115
Ritchie	5	11	16	8	7	15	13	18	31
Roane	1	3	4	--	3	3	1	6	7
Summers	3	6	9	--	--	--	3	6	9
Taylor	8	6	14	--	--	--	8	6	14
Tucker	--	--	--	--	--	--	--	--	--
Tyler	--	--	--	--	--	--	--	--	--
Upshur	28	27	55	21	21	42	49	48	97
Wayne	--	--	--	--	--	--	--	--	--
Webster	--	--	--	--	--	--	--	--	--
Wetzel	--	--	--	--	--	--	--	--	--
Wirt	--	--	--	--	--	--	--	--	--
Wood	110	83	193	126	84	210	236	167	403
Wyoming	13	14	27	6	8	14	19	22	41
Total	4408	4254	8662	1588	1652	3240	5996	5906	11.902

OTHER PRIVATE SCHOOLS
NET ENROLLMENT SUMMARY 1986-87

	Total Elementary			Total Secondary			Grand Total		
County	Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
Barbour	-	-	-	-	-	-	-	-	-
Berkeley	59	61	120	17	13	30	76	74	150
Boone	-	-	-	-	-	-	-	-	-
Braxton	-	-	-	-	-	-	-	-	-
Brooke	-	-	-	-	-	-	-	-	-
Cabell	-	-	-	-	-	-	-	-	-
Calhoun	-	-	-	-	-	-	-	-	-
Clay	-	-	-	-	-	-	-	-	-
Doddridge	-	-	-	-	-	-	-	-	-
Fayette	-	-	-	-	-	-	-	-	-
Gilmer	-	-	-	-	-	-	-	-	-
Grant	-	-	-	-	-	-	-	-	-
Greenbrier	2	2	4	-	1	1	2	3	5
Hampshire	-	-	-	-	-	-	-	-	-
Hancock	-	-	-	-	-	-	-	-	-
Hardy	-	-	-	-	-	-	-	-	-
Harrison	12	6	18	-	-	-	12	6	18
Jackson	-	-	-	-	-	-	-	-	-
Jefferson	52	44	96	2	1	3	54	45	99
Kanawha	103	74	177	3	-	3	106	74	180
Lewis	-	-	-	-	-	-	-	-	-
Lincoln	-	-	-	-	-	-	-	-	-
Logan	-	-	-	-	-	-	-	-	-
Marion	4	1	5	-	-	-	4	1	5
Marshall	-	-	-	-	-	-	-	-	-
Mason	-	-	-	-	-	-	-	-	-
Mercer	-	-	-	-	-	-	-	-	-
Mineral	-	-	-	-	-	-	-	-	-
Mingo	1	-	1	-	-	-	1	-	1
Monongalia	102	94	196	-	-	-	102	94	196
Monroe	-	-	-	-	-	-	-	-	-
Morgan	-	-	-	-	-	-	-	-	-
McDowell	1	-	1	-	-	-	1	-	1
Nicholas	-	-	-	-	-	-	-	-	-
Ohio	247	192	439	232	88	320	479	280	759
Pendleton	-	-	-	-	-	-	-	-	-
Pleasants	-	-	-	-	-	-	-	-	-
Pocahontas	-	-	-	-	-	-	-	-	-
Preston	-	-	-	-	-	-	-	-	-
Putnam	-	-	-	-	-	-	-	-	-
Raleigh	35	34	69	1	-	1	36	34	70
Randolph	12	8	20	1	1	2	13	9	22
Ritchie	4	4	8	-	-	-	4	4	8
Roane	-	-	-	-	-	-	-	-	-
Summers	6	8	14	-	1	1	6	9	15
Taylor	-	-	-	-	-	-	-	-	-
Tucker	-	-	-	-	-	-	-	-	-
Tyler	-	-	-	-	-	-	-	-	-
Upshur	-	-	-	-	-	-	-	-	-
Wayne	-	-	-	-	-	-	-	-	-
Webster	-	-	-	-	-	-	-	-	-
Wetzel	-	-	-	-	-	-	-	-	-
Wirt	-	-	-	-	-	-	-	-	-
Wood	151	185	336	-	-	-	151	185	336
Wyoming	13	7	20	-	-	-	13	7	20
Total	804	720	1.524	256	105	361	1.060	825	1.885

STATE EDUCATION STATISTICS, 1987–88 (Cont.)
Resources

	Average Teacher Salary		Pupil-Teacher Ratio		Federal Funds As Percent of School Revenues		Expenditures Per Pupil	
	Estimated 1988	1987	1988	1987	1987	1986	1987	1986
Alabama	$23,320 (41)	$23,200 (35)	19.3 (43)	19.8 (43)	11.7% (4)	11.8% (6)	$2,573 (49)	$2,565 (47)
Alaska	40,424 (1)	39,769 (1)	17.3 (29)	16.7 (22)	11.7 (4)	10.2 (12)	8,010 (1)	8,304 (1)
Arizona	27,388 (22)	25,972 (23)	18.6 (39)	18.4 (36)	9.0 (13)	10.7 (9)	3,544 (35)	3,336 (34)
Arkansas	20,340 (50)	19,904 (49)	17.1 (24)	17.5 (30)	11.5 (7)	11.4 (7)	2,733 (46)	2,658 (45)
California	33,159 (5)	31,219 (5)	22.9 (50)	23.0 (50)	7.1 (21)	7.3 (22)	3,728 (30)	3,543 (25)
Colorado	28,651 (17)	27,387 (17)	18.0 (33)	18.2 (33)	4.9 (38)	4.9 (41)	4,147 (18)	3,975 (17)
Connecticut	33,487 (4)	28,902 (7)	13.3 (1)	13.7 (1)	4.4 (45)	3.5 (51)	5,435 (5)	4,743 (6)
Delaware	29,573 (13)	27,467 (15)	16.1 (18)	16.0 (18)	7.7 (18)	8.1 (18)	4,825 (9)	4,610 (8)
District of Columbia	34,705 (2)	33,797 (2)	13.9 (3)	14.3 (4)	10.3 (11)	11.1 (8)	5,742 (4)	5,337 (4)
Florida	25,198 (28)	23,833 (30)	17.4 (31)	17.5 (30)	7.2 (20)	7.6 (20)	3,794 (25)	3,529 (27)
Georgia	26,190 (26)	24,200 (27)	18.7 (40)	18.9 (40)	7.1 (21)	8.2 (17)	3,374 (39)	2,966 (43)
Hawaii	28,785 (16)	26,815 (20)	21.6 (49)	22.6 (49)	11.8 (2)	10.5 (11)	3,787 (26)	3,807 (21)
Idaho	22,242 (44)	21,480 (43)	20.7 (48)	20.4 (46)	8.9 (14)	9.5 (13)	2,585 (48)	2,484 (49)
Illinois	29,663 (12)	28,238 (12)	17.2 (27)	17.4 (28)	4.3 (48)	4.6 (47)	4,106 (19)	3,781 (22)
Indiana	26,881 (25)	25,581 (24)	17.9 (32)	18.3 (34)	4.9 (38)	4.8 (43)	3,556 (34)	3,275 (36)
Iowa	24,847 (30)	22,615 (38)	15.6 (14)	15.5 (13)	5.1 (34)	5.2 (37)	3,808 (24)	3,619 (24)
Kansas	24,647 (32)	23,459 (31)	15.4 (12)	15.4 (11)	4.8 (41)	4.8 (43)	3,933 (21)	3,829 (20)
Kentucky	24,253 (35)	22,476 (39)	18.2 (35)	18.6 (38)	11.6 (6)	13.3 (1)	2,733 (46)	2,486 (48)
Louisiana	21,209 (48)	21,196 (48)	18.5 (38)	18.5 (37)	11.5 (7)	10.6 (10)	3,069 (44)	3,187 (39)
Maine	23,425 (40)	21,257 (47)	14.9 (7)	15.5 (13)	6.4 (26)	6.2 (28)	3,850 (23)	3,472 (32)
Maryland	30,933 (8)	28,893 (8)	17.1 (24)	17.1 (25)	5.1 (34)	5.4 (36)	4,777 (10)	4,447 (10)
Massachusetts	30,295 (10)	28,410 (10)	13.9 (3)	14.4 (5)	4.9 (38)	5.0 (39)	5,145 (7)	4,562 (9)
Michigan	32,926 (6)	31,500 (4)	20.1 (45)	20.2 (45)	5.9 (31)	5.9 (30)	4,353 (14)	4,176 (12)
Minnesota	29,900 (11)	28,340 (11)	17.1 (24)	17.4 (28)	4.2 (49)	4.3 (48)	4,180 (17)	3,941 (18)
Mississippi	20,562 (49)	19,447 (50)	18.8 (41)	19.0 (41)	10.5 (10)	12.0 (5)	2,350 (51)	2,362 (51)
Missouri	24,709 (31)	23,435 (32)	16.2 (19)	16.4 (21)	6.3 (27)	6.5 (26)	3,472 (36)	3,189 (38)
Montana	23,798 (38)	23,206 (33)	15.8 (16)	15.6 (15)	8.5 (16)	7.0 (23)	4,194 (16)	4,091 (15)
Nebraska	22,683 (42)	21,834 (42)	15.1 (9)	15.1 (8)	6.1 (29)	6.5 (26)	3,756 (29)	3,634 (23)
Nevada	27,600 (21)	26,960 (19)	20.2 (46)	20.4 (46)	4.4 (45)	5.0 (39)	3,573 (32)	3,440 (33)
New Hampshire	24,019 (37)	21,869 (40)	16.0 (17)	15.9 (17)	3.4 (51)	4.2 (49)	3,933 (21)	3,542 (26)
New Jersey	30,720 (9)	28,718 (9)	14.0 (5)	14.7 (6)	4.4 (45)	4.8 (43)	5,953 (3)	5,570 (3)
New Mexico	24,158 (36)	23,850 (29)	18.9 (42)	19.0 (41)	12.2 (1)	12.4 (2)	3,558 (33)	3,195 (37)
New York	34,500 (3)	32,000 (3)	15.2 (10)	15.4 (11)	4.8 (41)	5.7 (33)	6,497 (2)	6,011 (2)
North Carolina	24,900 (29)	23,879 (28)	18.2 (35)	18.7 (39)	7.9 (17)	8.8 (16)	3,129 (41)	2,948 (44)
North Dakota	21,660 (46)	21,284 (46)	15.6 (14)	15.3 (9)	9.4 (12)	9.0 (15)	3,437 (37)	3,483 (31)
Ohio	27,606 (20)	26,288 (22)	18.0 (33)	18.1 (32)	5.5 (33)	5.7 (33)	3,671 (31)	3,527 (29)
Oklahoma	21,630 (47)	21,468 (44)	16.9 (23)	16.9 (24)	5.6 (32)	5.9 (30)	3,099 (42)	3,146 (40)
Oregon	28,060 (19)	26,690 (21)	18.3 (37)	18.3 (34)	6.6 (25)	6.6 (25)	4,337 (15)	4,141 (14)
Pennsylvania	29,177 (14)	27,422 (16)	16.2 (19)	16.3 (19)	5.1 (34)	5.1 (38)	4,616 (11)	4,325 (11)
Rhode Island	32,858 (7)	31,079 (6)	15.0 (8)	15.0 (7)	4.5 (44)	4.9 (41)	4,985 (8)	4,667 (7)
South Carolina	24,403 (34)	23,201 (34)	17.2 (27)	17.3 (27)	8.9 (14)	9.3 (14)	3,237 (40)	3,058 (41)
South Dakota	19,758 (51)	18,781 (51)	15.5 (13)	15.6 (15)	11.8 (2)	12.1 (4)	3,097 (43)	3,051 (42)
Tennessee	23,785 (39)	22,627 (37)	19.6 (44)	19.9 (44)	11.1 (9)	12.2 (3)	2,827 (45)	2,612 (46)
Texas	25,558 (27)	24,903 (26)	17.3 (29)	17.2 (26)	7.1 (21)	7.4 (21)	3,409 (38)	3,298 (35)
Utah	22,572 (43)	23,035 (36)	24.7 (51)	23.4 (51)	6.1 (29)	5.7 (33)	2,415 (50)	2,390 (50)
Vermont	24,519 (33)	21,835 (41)	13.4 (2)	—	5.1 (34)	5.8 (32)	4,399 (13)	4,031 (16)
Virginia	27,193 (23)	25,039 (25)	16.3 (22)	16.8 (23)	—	—	3,780 (28)	3,520 (30)
Washington	28,217 (18)	27,285 (18)	20.2 (46)	20.5 (48)	6.3 (27)	6.1 (29)	3,964 (20)	3,881 (19)
West Virginia	21,736 (45)	21,446 (45)	15.2 (10)	15.3 (9)	7.5 (19)	7.9 (19)	3,784 (27)	3,528 (28)
Wisconsin	29,122 (15)	27,815 (14)	16.2 (19)	16.3 (19)	4.7 (43)	4.8 (43)	4,523 (12)	4,168 (13)
Wyoming	27,134 (24)	28,103 (13)	14.5 (6)	14.0 (2)	3.7 (50)	3.6 (50)	5,201 (6)	5,114 (5)
U.S. Average	$28,008	$26,556	17.6	17.7	6.4%	6.7%	$3,977	$3,756

Note: Numbers in parentheses denote state ranks.
Source: Education Department

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TABLE
NON-RETURNING PROFESSIONAL EDUCATORS

COUNTIES	NUMBER OF NON-RETURNING PROFESSIONAL EDUCATORS			PERCENTAGE OF COUNTY PROFESSIONAL EDUCATORS NON-RETURNING (FTE)			PERCENTAGE OF STATE PROFESSIONAL EDUCATORS NON-RETURNING (FTE)		
	1986-87	1987-88	1988-89	1986-87	1987-88	1988-89	1986-87	1987-88	1988-89
BARBOUR	12	11	17	5.85	5.33	5.92	.05	.04	.05
BERKELEY	50	48	57	8.02	7.61	8.93	.21	.21	.25
BOONE	48	44	52	11.56	10.89	12.88	.20	.19	.23
BRAXTON	21	7	21	9.48	3.15	9.25	.08	.03	.09
BROOKE	6	11	16	1.75	3.29	4.80	.02	.04	.07
CABELL	59	69	95	5.32	6.29	8.93	.25	.29	.42
CALHOUN	6	3.5	21	4.34	2.54	15.21	.02	.02	.09
CLAY	15	11	13	10.09	7.31	8.62	.06	.04	.06
DODDRIDGE	5	10	4	5.02	10.26	4.18	.02	.04	.02
FAYETTE	34	42	53	4.98	6.39	8.23	.14	.18	.23
GILMER	7	12	20	6.64	11.16	20.43	.02	.05	.09
GRANT	13	19	20	8.89	13.47	13.93	.05	.08	.09
GREENBRIER	15	20	47	3.30	4.42	10.77	.06	.08	.21
HAMPSHIRE	13	14	21	7.27	7.92	11.43	.05	.06	.09
HANCOCK	7	11	34	1.77	2.81	8.87	.02	.04	.15
HARDY	7	2	16	5.10	1.47	12.30	.02	.01	.07
HARRISON	38	39	52	4.19	4.56	6.26	.16	.16	.23
JACKSON	27	33	35	8.14	9.19	9.73	.11	.14	.15
JEFFERSON	28	24	51	7.31	6.34	12.91	.11	.10	.22
KANAWHA	188	191	206	7.71	7.92	8.63	.80	.82	.91
LEWIS	16	28	28	7.22	12.55	12.66	.06	.12	.12
LINCOLN	34	18	39	9.51	5.06	11.27	.14	.07	.17
LOGAN	78	25	67	12.12	3.92	10.40	.33	.10	.30
MARION	27	18	34	3.91	2.67	5.06	.11	.07	.15
MARSHALL	14	2	24	2.95	.41	5.00	.05	.01	.11
MASON	14	19	35	4.13	5.65	10.51	.05	.08	.15
MCDOWELL	54	37	92	8.28	5.72	15.10	.23	.16	.41
MERCER	21	0	40	2.39	.00	4.63	.08	.00	.18
MINERAL	16	29	34	4.33	8.11	9.86	.06	.12	.15
MINGO	48	34	54	8.70	6.25	10.26	.20	.15	.24
MONONGALIA	49	39	63	7.17	5.91	9.67	.20	.16	.28
MONROE	9	8	12	5.55	4.80	7.27	.03	.03	.05
MORGAN	24	17.5	35	16.70	12.30	25.45	.10	.07	.15
NICHOLAS	16	18	39	4.15	4.73	10.28	.06	.07	.17
OHIO	14	14	26	2.85	2.95	5.53	.05	.06	.11
PENDLETON	4	9	6	3.75	8.36	5.62	.01	.03	.03
PLEASANTS	4	8	7	3.27	6.93	6.19	.01	.03	.03
POCAHONTAS	13	6	11	10.19	4.95	9.52	.05	.02	.05
PRESTON	27	25	47	6.37	6.09	11.48	.11	.11	.21
PUTNAM	34	23	54	6.45	4.43	10.55	.14	.09	.24
RALEIGH	54	65	105	5.26	6.38	10.63	.23	.28	.46
RANDOLPH	30	45	25	7.56	11.45	6.62	.12	.19	.11
RITCHIE	9	15	10	6.47	10.86	7.96	.03	.06	.04
ROANE	37	21	21	18.38	10.19	10.09	.15	.09	.09
SUMMERS	14	9	9	8.00	5.19	5.53	.05	.03	.04
TAYLOR	10	11	24	4.67	5.23	11.70	.04	.05	.11
TUCKER	10	14	20	9.75	13.46	19.60	.04	.06	.09
TYLER	11	7	13	7.61	4.96	9.42	.04	.03	.06
UPSHUR	19	22	20	6.11	7.00	6.54	.08	.09	.09
WAYNE	40	14	36	6.71	2.49	6.49	.17	.06	.16
WEBSTER	17	14	14	9.55	7.89	7.88	.07	.06	.06
WETZEL	11	17	24	3.85	6.13	8.42	.04	.07	.11
WIRT	2	3	10	5.47	4.17	13.90	.01	.01	.04
WOOD	67	55	96	5.17	4.54	8.26	.26	.23	.42
WYOMING	25	36	27	4.63	6.74	5.21	.10	.15	.12
DEAF AND BLIND	NA	NA	7	-	-	NA	-	-	.03
TOTALS	1466	1347	2054	6.26	5.60	9.04	6.26	5.60	9.04

[illegible]

STATE EDUCATION STATISTICS, 1987–88
Student Performance

	American College Testing Program (28 states)			Scholastic Aptitude Test (22 states)			Graduation Rate	
	1988 Score	1987 Score	Score Change	1988 Score	1987 Score	Score Change	1987	1986
Alabama	18.1 (21)	18.0 (21)	+0.1 (5)	—	—	—	70.2 (34)	67.3 (40)
Alaska	18.4 (19)	18.7 (19)	–0.3 (26)	—	—	—	66.7 (41)	68.3 (37)
Arizona	19.3 (9)	19.3 (9)	0.0 (7)	—	—	—	64.4 (45)	63.0 (47)
Arkansas	17.9 (25)	17.8 (24)	+0.1 (5)	—	—	—	77.5 (18)	78.0 (15)
California	—	—	—	908 (4)	906 (9)	+2 (6)	66.1 (42)	66.7 (42)
Colorado	19.7 (7)	19.9 (4)	–0.2 (23)	—	—	—	73.7 (26)	73.1 (29)
Connecticut	—	—	—	908 (4)	912 (5)	–4 (13)	80.5 (11)	89.8 (2)
Delaware	—	—	—	899 (10)	910 (6)	–11 (22)	70.1 (35)	70.7 (34)
District of Columbia	—	—	—	839 (21)	842 (19)	–3 (9)	55.5 (51)	56.8 (51)
Florida	—	—	—	890 (13)	893 (13)	–3 (9)	58.6 (50)	62.0 (49)
Georgia	—	—	—	848 (19)	840 (20)	+8 (1)	62.5 (47)	62.7 (48)
Hawaii	—	—	—	888 (15)	881 (16)	+7 (2)	70.8 (33)	70.8 (33)
Idaho	19.3 (9)	19.0 (14)	+0.3 (1)	—	—	—	78.8 (14)	79.0 (13)
Illinois	18.9 (15)	18.9 (15)	0.0 (7)	—	—	—	75.7 (22)	75.8 (21)
Indiana	—	—	—	870 (18)	874 (18)	–4 (13)	73.7 (2)	75.2 (23)
Iowa	20.3 (1)	20.3 (2)	0.0 (7)	—	—	—	86.4 (5)	87.5 (5)
Kansas	19.1 (12)	19.3 (9)	–0.2 (23)	—	—	—	82.1 (9)	81.5 (8)
Kentucky	18.2 (20)	18.3 (20)	–0.1 (18)	—	—	—	67.4 (39)	68.6 (36)
Louisiana	17.1 (27)	16.9 (27)	+0.2 (3)	—	—	—	60.1 (49)	61.8 (50)
Maine	—	—	—	896 (11)	899 (10)	–3 (9)	79.3 (13)	76.5 (20)
Maryland	—	—	—	908 (4)	914 (3)	–6 (21)	74.5 (23)	76.6 (19)
Massachusetts	—	—	—	906 (7)	909 (7)	–3 (9)	76.5 (20)	76.7 (18)
Michigan	18.8 (17)	18.8 (17)	0.0 (7)	—	—	—	62.4 (48)	67.8 (38)
Minnesota	19.9 (3)	20.2 (3)	–0.3 (26)	—	—	—	90.6 (1)	91.4 (1)
Mississippi	16.2 (28)	16.3 (28)	–0.1 (18)	—	—	—	64.8 (44)	63.3 (46)
Missouri	19.1 (12)	19.2 (12)	–0.1 (18)	—	—	—	74.4 (24)	75.6 (22)
Montana	19.9 (3)	19.9 (4)	0.0 (7)	—	—	—	86.2 (6)	87.2 (6)
Nebraska	19.8 (5)	19.8 (7)	0.0 (7)	—	—	—	86.7 (4)	88.1 (4)
Nevada	19.0 (14)	19.1 (13)	–0.1 (18)	—	—	—	72.1 (31)	73.1 (29)
New Hampshire	—	—	—	933 (1)	938 (1)	–5 (15)	72.7 (29)	73.3 (28)
New Jersey	—	—	—	893 (12)	892 (14)	+1 (8)	77.2 (19)	77.6 (16)
New Mexico	18.0 (22)	18.0 (21)	0.0 (7)	—	—	—	71.7 (32)	72.3 (31)
New York	—	—	—	889 (14)	894 (12)	–5 (15)	62.9 (46)	64.2 (45)
North Carolina	—	—	—	841 (20)	838 (21)	+3 (5)	67.8 (37)	70.0 (35)
North Dakota	18.7 (18)	18.8 (17)	–0.1 (18)	—	—	—	88.4 (3)	89.7 (3)
Ohio	19.3 (9)	19.3 (9)	0.0 (7)	—	—	—	82.8 (8)	80.4 (11)
Oklahoma	18.0 (22)	17.7 (25)	+0.3 (1)	—	—	—	72.6 (30)	71.6 (32)
Oregon	—	—	—	923 (2)	928 (2)	–5 (15)	72.8 (28)	74.1 (26)
Pennsylvania	—	—	—	886 (16)	891 (15)	–5 (15)	78.7 (15)	78.5 (14)
Rhode Island	—	—	—	900 (9)	898 (11)	+2 (6)	69.4 (36)	67.3 (40)
South Carolina	—	—	—	838 (22)	832 (22)	+6 (3)	66.9 (40)	64.5 (43)
South Dakota	19.8 (5)	19.6 (8)	+0.2 (3)	—	—	—	79.7 (12)	81.5 (8)
Tennessee	18.0 (22)	18.0 (21)	0.0 (7)	—	—	—	67.8 (37)	67.4 (39)
Texas	—	—	—	879 (17)	875 (17)	+4 (4)	65.1 (43)	64.3 (44)
Utah	18.9 (15)	18.9 (15)	0.0 (7)	—	—	—	80.6 (10)	80.3 (12)
Vermont	—	—	—	909 (3)	914 (3)	–5 (15)	78.0 (16)	77.6 (16)
Virginia	—	—	—	902 (8)	907 (8)	–5 (15)	74.0 (25)	73.9 (27)
Washington[1]	—	—	—	—	—	—	77.8 (17)	75.2 (23)
West Virginia	17.6 (26)	17.6 (26)	0.0 (7)	—	—	—	76.2 (21)	75.2 (23)
Wisconsin	20.2 (2)	20.4 (1)	–0.2 (23)	—	—	—	85.4 (7)	86.3 (7)
Wyoming	19.5 (8)	19.9 (4)	–0.4 (28)	—	—	—	89.3 (2)	81.2 (10)
U.S. Average	18.8	18.7	+0.1	904	906	–2	71.1	71.6

Note: Numbers in parentheses denote state ranks.

[1] Washington is neither an SAT nor an ACT state since it administers its own test.

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TABLE 20

STATE SUMMARY OF CONTENT SPECIALIZATIONS COMPLETED BY GRADUATES

	ACTUAL GRADUATES					PROJECTED GRADUATE	
CONTENT SPECIALIZATION	1983-84	1984-85	1985-86	1986-87	1987-88	1988-89	1989-9
AGRICULTURE (VOCATIONAL)	9	11	15	16	10	11	1
ART	42	45	27	29	28	36	3
ATHLETIC TRAINER	16	24	33	29	24	25	2
BEHAVORIAL DISORDERS (EXCLUDING AUTISM)	32	25	22	89	64	89	8
BEHAVORIAL DISORDERS (INCLUDING AUTISM)	0	0	0	0	0	8	
BIOLOGY	47	38	40	49	54	69	5
BUSINESS EDUCATION	24	37	27	40	29	37	3
BUSINESS PRINCIPLES	15	12	15	26	18	24	2
CHEMISTRY	15	19	17	21	20	22	1
CHEMISTRY/PHYSICS	0	0	0	0	2	2	
CONSUMER AND HOMEMAKING	38	22	26	18	15	28	2
COUNSELOR	47	43	54	66	65	82	8
EARLY EDUCATION	145	144	102	94	98	78	4
EDUCATIONAL AUDIOLOGIST	19	5	4	4	5	7	1
ENGLISH	68	62	52	56	43	19	
ENGLISH/LANGUAGE ARTS	NAP	NAP	3	5	45	87	10
FRENCH	10	13	[illegible]	7	6	10	1
GENERAL MATH - ALGERBRA I	0	0		0	0	3	
GENERAL SCIENCE	82	105	11	112	113	114	11
GERMAN	0	3	0	2	1	1	
GIFTED	61	64	35	64	55	71	9
HEALTH	73	61	50	38	46	48	4
HEARING IMPAIRED	0	0	NAP	NAP	NAP	NAP	NA
INDUSTRIAL ARTS/TECHNOLOGY	12	16	17	24	16	21	1
JOURNALISM	6	5	2	10	7	6	
LANGUAGE ARTS (4-8,7-9)	43	35	33	32	29	25	
LATIN	3	0	3	0	0	1	
MARKETING	5	10	5	10	4	10	1
MATHEMATICS	99	137	160	175	152	132	12
MENTALLY IMPAIRED	197	203	179	184	177	199	20
MIDDLE CHILDHOOD	14	12	8	13	19	12	1
MULTI-CATEGORICAL	2	0	NAP	NAP	NAP	NAP	NA
MULTI-SUBJECTS	603	720	672	590	687	632	60
MUSIC	106	79	91	78	59	77	7
OCCUPATIONAL HOME ECONOMICS	0	0	0	1	0	2	
ORAL COMMUNICATION	24	15	12	17	20	18	1
PHYSICAL EDUCATION	246	211	232	185	165	180	19
PHYSICAL EDUCATION TO PHYSICALLY HANDICAPPED	0	0	1	1	0	0	
PHYSICALLY HANDICAPPED	11	4	9	4	9	5	1
PHYSICS	2	7	9	8	13	4	
PRESCHOOL HANDICAPPED	2	0	4	14	11	7	1
PREVOCATIONAL EXPLORATION	0	81	37	34	32	40	3
PRINCIPAL	126	137	161	152	144	173	10
READING SPECIALIST	60	43	28	26	36	34	3
RUSSIAN	0	0	0	0	0	0	
SAFETY EDUCATION	98	71	78	56	36	46	4
SCHOOL BUSINESS OFFICIAL	0	0	NAP	NAP	NAP	NAP	NA
SCHOOL LIBRARY-MEDIA	21	34	24	25	24	32	2
SCHOOL NURSE	0	0	0	0	0	0	1
SCHOOL PSYCHOLOGIST	8	17	9	7	18	10	1
SECRETARIAL STUDIES	2	11	8	4	6	10	1
SEVERELY AND PROFOUNDLY HANDICAPPED	0	31	18	5	3	4	
SOCIAL SERVICE AND ATTENDANCE	19	5	4	11	9	7	
SOCIAL STUDIES	193	174	177	192	154	171	1
SPANISH	7	9	6	6	5	4	1
SPECIFIC LEARNING DISABILITIES	130	150	170	145	162	193	2
SPEECH LANGUAGE PATHOLOGIST	46	39	24	42	24	34	4
SUPERINTENDENT	7	5	10	14	10	14	1
SUPERVISOR OF INSTRUCTION	9	7	19	21	15	22	1
VISUALLY IMPAIRED	0	0	NAP	NAP	NAP	NAP	N
VOCATIONAL ADMINISTRATOR	15	10	16	8	4	10	1
VOCATIONAL TECHNICAL	0	6	5	4	1	2	
TOTALS	2,859	3,017	2,872	2,863	2,792	3,008	2,9

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TABLE 21

NEW COUNTY PROFESSIONAL TEACHERS EMPLOYED 1987-88 AND 1988-89 - FIRST YEAR TEACHERS

	NEW TEACHERS				FIRST YEAR TEACHERS					
	NUMBER OF NEW TEACHERS EMPLOYED (FTE)		PERCENTAGE OF TOTAL COUNTY TEACHERS (FTE)		NUMBER OF FIRST YEAR TEACHERS EMPLOYED (FTE)		PERCENTAGE OF NEW TEACHERS EMPLOYED (COUNTY) (FTE)		PERCENTAGE OF TOTAL TEACHERS (COUNTY) (FTE)	
COUNTIES	87-88	88-89	87-88	88-89	87-88	88-89	87-88	88-89	87-88	88-89
BARBOUR	16.5	10	7.99	4.94	11.5	5	70	50	5.57	2.47
BERKELEY	65	86	10.30	13.49	64	41	98	48	10.14	6.42
BOONE	45	34	11.13	8.42	28	18	62	53	15.34	4.46
BRAXTON	17	8	7.65	3.52	17	4	100	50	7.65	1.76
BROOKE	11	6	3.29	1.80	3	4	27	67	.89	1.20
CABELL	56.5	47	5.15	4.42	56.5	30.4	100	65	5.15	2.85
CALHOUN	4	9	2.89	6.52	2	4	50	44	1.45	2.89
CLAY	15	21	9.98	13.92	13	13	87	62	8.64	8.67
DODDRIDGE	8	3	8.20	3.14	5	1	63	33	5.12	1.04
FAYETTE	31	37	4.71	5.74	19	16	61	43	2.89	2.48
GILMER	3.5	3	3.26	3.06	1	2	29	67	.93	2.04
GRANT	24	18	17.02	12.54	0	7	0	39	.00	4.87
GREENBRIER	10	41.5	2.21	9.51	2	25	20	60	.44	5.73
HAMPSHIRE	20	22	11.32	11.97	20	8	100	36	11.32	4.35
HANCOCK	13	11	3.32	2.87	2	4	15	36	.51	1.04
HARDY	2	14.5	1.47	11.15	2	6	100	41	1.47	4.61
HARRISON	4	13	.46	1.56	0	5	0	38	.00	.60
JACKSON	34	18	9.47	5.00	26.5	10	78	56	7.38	2.78
JEFFERSON	32	57	8.47	14.43	15	23	47	40	3.97	5.82
KANAWHA	215	122	8.91	5.11	76	61	35	50	3.15	2.55
LEWIS	27	20	12.10	9.04	12	9	44	45	5.38	4.07
LINCOLN	18.5	27	5.20	7.80	15.5	21	84	78	4.35	6.07
LOGAN	23	51	3.61	7.91	17	39	74	76	2.67	6.05
MARION	29.5	18	4.36	2.67	0	12	0	67	.00	1.78
MARSHALL	10	7	2.09	1.48	10	6	100	86	2.09	1.27
MASON	9	26	2.67	7.80	4	14	44	54	1.19	4.20
MCDOWELL	19	29	2.93	4.78	19	16	100	55	2.93	2.64
MERCER	25	31	2.86	3.59	24	23	96	74	2.74	2.66
MINERAL	30	19	8.39	5.51	6	11	20	57	1.67	3.19
MINGO	23	45	4.23	10.26	22	36	96	80	4.04	6.84
MONONGALIA	43	64	6.51	9.83	16	35	37	55	2.43	5.37
MONROE	4	14	2.40	8.49	4	14	100	100	2.40	8.49
MORGAN	14	21	9.84	15.27	12	12	86	57	8.43	8.72
NICHOLAS	18	30	4.73	7.91	12	24	67	80	3.15	6.33
OHIO	21	11.5	4.43	2.44	18	4.5	86	39	3.80	.95
PENDLETON	12	9.5	11.15	8.91	2	8.5	17	89	1.85	7.97
PLEASANTS	6	8	5.19	7.07	1	2	17	25	.86	1.76
POCAHONTAS	4.5	4	3.71	3.46	4.5	2	100	50	3.72	1.73
PRESTON	29	39	7.07	9.52	18	25	62	64	15.11	6.10
PUTNAM	23	29	4.43	5.66	10	1	44	3	1.92	.19
RALEIGH	48	55	4.71	5.57	37	26	77	47	3.63	2.63
RANDOLPH	38	7	9.66	1.85	18	4	47	57	4.58	1.05
RITCHIE	11	3	7.97	2.39	4	2	36	67	2.90	1.59
ROANE	26	16	12.62	7.67	19	11	73	69	9.22	5.27
SUMMERS	2	8	1.15	4.92	1	8	50	100	.57	4.92
TAYLOR	4	15	1.90	7.31	3	12	75	80	1.43	5.85
TUCKER	8	20	7.69	19.60	8	12	100	60	7.69	11.76
TYLER	9	10	6.38	7.24	7	6	78	60	4.96	4.34
UPSHUR	15	14	4.77	4.58	11	9	73	64	3.50	2.94
WAYNE	9	46	1.60	8.30	9	30	100	65	1.60	5.41
WEBSTER	11	13	6.20	7.32	8	8	73	62	4.51	4.50
WETZEL	18	7	6.49	2.45	13	2	72	29	4.69	.70
WIRT	4	6	5.55	8.34	4	2	100	33	5.55	2.78
WOOD	35	56.5	2.89	4.86	14	31.5	40	56	1.16	2.71
WYOMING	21	35	3.93	6.76	20	31	95	89	3.74	5.99
DEAF AND BLIND	-	5	-	NA	-	0	-	0	-	0

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APPENDIX A

Appalachia Educational Laboratory
1989 Needs Assessment Project

Omni Virginia Beach Hotel
Virginia Beach, Virginia
July 22, 1989

Time: 9:00 a.m. - 11:30 a.m.

Title: State Caucus Meeting Outcomes

State: (State Name) West Virginia

Room: (Room Name or Number) Suite 711

State Consultant Name: (His or Her Name) Karen Nicholson

AEL State Liaison Person: (AEL Staff Member Name) Pam Lutz

Members of State Caucus Participating:

1. Hank Marockie
2. Keith Smith
3. Rob Cleminson
4. Bill Baker
5. Donnaretta Sebolt
6. Lois Kauffelt
7. Lucia James
8. Earl Ray Tomblin

Others Present
e.g., observers, guests, spouses, etc.:

1. Jack Sanders
2. Terry Eidell

Merrill Meehan

APPENDIX B

Appalachia Educational Laboratory
1989 Needs Assessment Project

NEED STATEMENTS

1. We need more community support of local public schools.

2. We need ways to ensure that educational policy is informed by the outcomes of educational research and development.

3. We need educational reforms at both the state and local levels.

4. We need to improve career education programming/career guidance services.

5. We need to improve vocational education.

6. We need improved financial support for local schools.

7. We need to provide students information about Acquired Immune Deficiency Syndrome (AIDS).

8. We need to improve sex education programming in K-12 schools.

9. We need to improve teachers' working conditions.

10. We need to improve the recruitment of highly talented individuals into the teaching profession.

11. We need to improve the involvement of parents/guardians in the education of their school-age children.

12. We need to improve students' mastery of basic skills.

13. We need special programs for at-risk youth in danger of dropping out of school.

14. We need to improve professional development programs for teachers and school administrators.

15. We need to improve the involvement in decisionmaking of those implementing and those affected by decisions at the school level.

16. We need to improve programs that enhance secondary students' motivation to learn.

17. We need programs to enhance the functioning of local boards of education.

18. We need to provide programs to address the special needs of minority students and community members.

19. We need to improve instructional programming for middle school-age students.

20. We need to improve school facilities to ensure the delivery of quality education to all children.

21. We need programs to improve students' higher order thinking skills.

22. We need programs to improve adult literacy.

23. We need programs to improve the care and education of preschool children.

24. We need programs that address the special needs of small, rural schools.

25. We need programs that address the special needs of urban schools.

26. We need programs that provide care for the children of public school students.

27. We need to study and report on innovative programs to improve teacher preparation, induction, and professional development.

28. We need to enhance the involvement of the state's higher education community in the improvement of local schools.

29. We need to study the use of technology as a means for improving the delivery of instruction to all children.

30. We need to improve educational services for all exceptional students.

APPENDIX C

Educational Need Statements for West Virginia, Page ____

EDUCATIONAL NEED STATEMENT	RANKING OF IMPORTANCE	ASSUMPTIONS ABOUT THE STATE'S AWARENESS OF AS WELL AS CAPABILITY AND READINESS TO ADDRESS THE NEED STATEMENT			OPPORTUNITIES AND/OR RESOURCES THAT COULD HELP THE STATE ADDRESS THE NEED STATEMENT	LIKELIHOOD THAT THE STATE WILL USE ASSISTANCE FROM AEL TO ADDRESS THE NEED STATEMENT
• The educational need statements are derived from the 1985 AEL NA process, the 1987 AEL NA survey, the 1989 AEL Resource Center "hot" topics, and the 1989 AEL information base scanning system.	Following the need statements ranking activity, use • High, • Medium, or • Low for each need statement.	1. AWARENESS • High • Medium • Low	2. CAPABILITY • High • Medium • Low	3. READINESS • High • Medium • Low	For example: • Favorable climate in state • Pertinent legislation • Available resources, including AEL • Forthcoming R & D products	Use: • High Likelihood • Moderate Likelihood • Small Likelihood
NS No. ____		1. 2. 3.				

6/23/89

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